

* Major Review Pages

- Software available in some form
- Production - to be done
- Major analysis - to be done

* Fy95 milestones (compare to Fy94)
* my special analysis list

* local database maintenance
+ tape backup

(*) preservation of old sources restore from CR/LIBMAN

(*) older - or precursor databases
ex. CEDR of Helios
LIB of Voyager/Isee

Software 1

Local versions now available at some level:

Pioneer Crick work PIODRP, FLXDBG, FLXLST, EDRLST
file→file no merging
no logs / catalogs

John trajectory list

Voyager John Lselect (some debugging needed)
STATUS list

(GENERAL) PAM TESTM / BX GNEW calibration software of Don Reames

ACE/gr our plot tool from P. Turner

I. Production - yet to be done

Pioneer decide how to finalize - (merging?)
(logs/catalogs/
database structuring)
(implied utilities
depending)

What happens to PITA & RATE databases locally
" " FLUX (PENC, 6250) database
(Nands milestone item)

Voyager decide - log dataset? (list/modify utilities)
Edgar (let them know an Edr is available)

EDRLOG (let the Log know an EDR is available)
EDRSAVE ?

ENGEN

ENC MRG

ENCIT

(Editscan ?)

Edrlist (does Nand have a version DEDRLIST?)

OWL utilities

SC 31, 32 table utilities

TRAJECTORY LIST PROGRAM

I Major Standard Analysis - yet to be done

Pioneer FLUXPLOT (FLUX CATALOG design limitations -
utilities?)

MATRIX calibration / diagnostic tool

Fourier

Voyager FLUXPLOT (FLUX CATALOG design limitations -
utilities ?)

MATRIX

PCPHA
(PCFLUX/RATE add on to FLUXPLOT)

Maintain data / enable analysis ONLY

ISEE

1 AU
data
FMCD

FLUXPLOT

[same questions as Voyager]

MATRIX

PCPHA

PCFLUX/RATE (add on to Fluxplot)

→ Fourier

Helios

FLUXPLOT

[same questions as Pioneer]

MATRIX

PCPHA

IMP 6, 7, 8

1 AU
data
FMCD

FMCD FLUXPLOT version

" RATEPLOT (utilize SMCT)

(Fourier ?)

COSMIC RAY SUPPORT
 WORK CONTROL PLAN FOR FISCAL YEAR 1995
 Task Assignment 66-003-A5
 Date: November 8, 1994

The following projects are preliminary at this time. Others to be defined may take priority at a later date, as specified by GSFC.

- 110-1 Finish capability to plot time-history, spectra, hysteresis in the new local analysis tool software, and save the configuration of graphs and plots.
 - 110-2 Port the special version of IMP FLUXPLOT which Dr. McDonald uses, after making a disk read version.
 - 110-3 develop method of plotting time-history standard text plot datasets using ACE/gr to replace/augment the PL3800 mainframe plot program options- batch mode plotting.
 - 110-3a source code segment(allow plot options and modify ACE parameter files)
 - 3b CLIST type methodology replacement (PERL or other tool)
 - 3c add trajectory scale handling(if timely)
 - 110-4 develop method of plotting spectrum data standard text plot datasets using ACE/gr to replace/augment the PL3810 mainframe plot program options- batch mode plotting.
 - 110-4a source code segment(allow plot options and modify ACE parameter files)
 - 4b CLIST type methodology replacement (PERL or other tool)
 - 110-5 develop method of plotting spectrum data standard text plot datasets using ACE/gr to replace/augment the HYST mainframe plot program options- batch mode plotting..
 - 110-5a source code segment(allow plot options and modify ACE parameter files)
 - 5b CLIST type methodology replacement (PERL or other tool)
 - 110-6 Take FLUX catalog responses from the mainframe datasets and create separate tables in local directory structures. (eliminate FLUX catalog design limitations- preparatory to Pioneer background calculation development).
 - 6a Pioneer response tables
 - 6b Voyager response tables
 - 110-7 Study feasibility of reformatting Pioneer FLUX databases into a Voyager like Encyclopedia format.
 - 7a design phase if feasible
 - 7b code/test phase if feasible
 - 110-8 Port the Voyager SRDLST (trajectory listing) program to the local workstation
 - 110-9 Port the Voyager EDRLIST (EDR listing) program to the local workstation
 - 9a convert EXHEAD assembler to FORTRAN
- } Helios?
 } ISEE?
- } Nands disk
] read version ?
] still needed?

item	oct94	nov	dec	jan	feb	mar	apr	may	jun	jul	aug	
110												
110-1												
110-2												
110-3*												
110-4*												
110-5*												

1a-->1b->1c->?
 1a-->1b->
 1a->1b->

```

110-6          a----->b----->
110-8          ----->
110-9          a-> | ----->
110-7          -->a-->b----->
230-1          ---->(a) | <-----> Voyager-1 ENCY database from UNITREE
                  -----><-----> Voyager-2 ENCY database from UNITREE
                  ---->(b) |           <---->IMP-6,7,8 FLUX databases ++ #
                  -->(c)           *<----> IMP-7,8 FLEX databases ++ #
                  -->(c)           *<----> IMP-6,7,8 SMCT databases ++ #
                  -->(d)           *-----> Helios-A, 6250 FLUX data
                           *-----> Helios-B, 6250 FLUX data
                           *-----> Pioneer-10, PENC FLUX data
                           *-----> Pioneer-11, PENC FLUX data
320-1          -john local workstation production procedures as needed ----->
200          >----->
210-1          >--->| Voyager cruise data for NSSDC submission
310          >----->
330          >----->
400          >----->
500          >----->

* start times for these are contingent on potential special
request conflict priorities
(a) | about 75 MBytes of data were inaccessible in UNITREE
      and will need to be regenerated. All other data in
      UNITREE (thru VOLUME 551183) are now in local storage
(b) | all data have been downloaded to local storage thru I-8 reel 33
(c)  all data have been written from tape to mainframe disk
      files, and will be downloaded after existing local data
      has been verified and compressed. One IMP-7 FLEX tape and
      3 IMP-6 SMCT tapes need to be recovered from backups.
++ <----> verification of data
#   These data are used by Dr. McDonald as a 1 AU reference.
(d) work has begun to develop mainframe disk files from the tapes

```

5.0 RESOURCES

HSTX estimates that this task will require 1 senior analyst programmer, and 1 junior analyst programmer through the fiscal year 1994.

6.0 COMPUTER UTILIZATION

Computers	Minutes
IBM mainframe	(no change from FY94)
IBM PC (2)	Dedicated
SUN SPARCstation 1+	Dedicated
SUN SPARCstation 2	Dedicated
SUN SPARCstation 10	Dedicated (to be added soon)

Analysis needs to do work locally

- 1) minimum local databases (access to all fluxes and rates)

sizes in existing "granularity" (extrapolated from 1989 census)
(without consideration of coverage %)

V-1	ENCY	6000 MB
V-2	ENCY	7000 MB
P-10	FLUX	3000 MB
P-11	FLUX	1700 MB
IC-3	ENCY	4000 MB
H-A	FLUX	1250 MB
H-B	FLUX	730 MB
I-8	FLUX	740 MB
I-8	FLEX	740 MB
I-8	SMCT	600 MB
I-7	FLUX	270 MB
I-7	FLEX	270 MB
I-7	SMCT	450 MB
I-6	FLUX	154 MB

round to 30 GB

Auxilliary data needed: trajectory
solarwind
magnetic field

sizes(character datasets of selected parameters):

- 2) fluxplot functions (see problem enumeration elsewhere)

a. V/I

P/H

IMP fluxplot
rateplot (using SMCT)

b. Mavplot -> movavg (using ft31,32 of fluxplot as input)

c. Matrix functions (e.g. consistency options)

- 3) Pioneer Background Calculation method.

a. Very cumbersome mainframe procedure which is limited
by the design of the FLUX CATALOG

- 4) get to standard plot dataset format if not provided by fluxplot
function

a. ex. FLUXTNNN, GETDATA, PIOPILOT
this style of dataset has readable dates for listing data

b. and/or go to ACE format X Y DY type for most applications
ACE has no direct way of handling time on the X axis
(at Pam's current level of understanding of the program)
so times must be in fractional years for ex.

- 5) work out a method to edit standard ACE model parameter files, or
create them, in order to ultimately produce plots from a batch
command capability in ACE.

a. work out how to combine shell script methodology
with data plotting to do volume work in background.

b. the experience so far shows that the Post Script printer
loses plots if too many are spooled to it, even if lpr's
are requested from post script plot files.

- 6) Develop the software needed to do hysteresis plots locally
 - a. These plots are normally done from our standard 26 day quiet time datasets.
An ACE pre-processor is needed to put the data together correctly and produce x dx y dy type output for ACE.
- 7) Port/modify the MODUGRAD program and procedures for the UNIX workstation (radial gradient calculations)
- 8) Port the software which makes fits in momentum, rigidity, total energy.
 - a. This includes all related manipulation functions to get at the fit parameter values for plotting/listing
- 10) Port/modify the latitudinal gradient calculation procedures to the local workstation.
- 11) Port the software which makes ratio calculations, both from spectrum type input and from time history type input
 - a. This includes all related manipulation functions to get at the ratio parameter values for plotting/listing
- 12) Port the software which makes solarwind averages, and plasma pressure calculations from input we have.
 - a. This includes all related manipulation functions to get at the values for plotting/listing
- 13) Port the software which selects magnetic field data from the input we have and produces plot type output.
- 14) Helios orbital information/plotting ?

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General Problems in FLUXPLOTS :

- This is noticed in voyager (implies v/i ; not sure about p/h) Sometimes wrong fluxes are generated by FLUXPLOT due to a strange circumstance. One case where i cant remember if a malfunction was the cause- Nov 77 time period where no counts were accumulating but live time was adding up incorrectly. The correct fluxes were found by excluding a segment of time .
- There is some restriction on requesting fluxes over ???? boundary. (is this status change boundaries?)

In FLUXPLOT(P/H & V/I) versions:

- there are t/f/yn / type conflicts between mode,bin and si cards; and LSIZE/npoints JCL implications, all which cause abends
- If the time-history plot flag is enabled, the ft07 time statement reflects the aligned start time, rather than the si card time
- if the energy bin request crosses MODE boundaries, a separate step after FLUXPLOT is required to obtain a flux from its two component fluxes
- Exclude times must always be used, where necessary (quiet time reqs)
- Different sets of bin cards are necessary for parts of satellite lives for v1,v2,p10 (possibly others ; the exact card input desired is not documented for the satellite lifetimes- depends on the instrument health
- Background corrections are done differently for different data and must now be done is a step subsequent to FLUXPLOT

In FLUXPLOT(P/H) versions:

- there is no MEAN facility in P/H version
- LP2 mode card for p10 must be first, if bin energy range is used
- for p10, a portion of the early data is requested by 6250 vs PENC on the S card
- pioneer/helios fluxplot ft07 output fluxes are carried over to the subsequent entry even if that bin had 0 counts
- pioneer/helios fluxplot ft07 output fluxes are sometimes an absurd number if that bin had 0 counts
- special LET analysis for pioneer is available only thru the FT06 dd card (?) (are other data also limited to FT06??)
- pioneer/helios et 2 and 3 must be added for ft07 output fluxes for high energy protons
- pioneer-10 hs2 bg mode must be subtracted for its energy range in a separate step
- P10 30-56 p (and sub-bins if used) must be corrected for background in a separate step

In FLUXPLOT(IMP) version:

- IMP time history data must be "redated" to get summary start times compatible with other satellites. The REDATE code must be modified depending on the data input.
- IMP uses the concept of 'include' times, only; there is no 'exclude' card. 'include card' times must be refigured, taking into account excluded times, for each type of time-history average desired, or for spectra.

-Other data problems exist in IMP, such as the LED C detector element problem, which are not known by Pam (except Bob knows these)

Other common considerations :

- Sometimes data are requested to be renormalized by some factor and plotted with other data, after a fluxplot run has already been made.
- Background correction data are used when requested, and apply only to selected data- The determination of the background is not done in the same way for all data.
- the ft30 -> ft31,ft32 conversion program only works for time history data and where more than one record has been written (related to npoints i think) . (there are other bugs too)
- The primary output of MAVPLOT (5 day moving averages) is no longer used; rather the sysout dataset is used and reformatted to produce plot datasets. The reform program can only handle one input bin situations.
- Input to MAVPLOT is intimately connected to certain FLUXPLOT input.
- Also, there are character data location differences among the ft31,ft32 formats for isee,imp,voyager at least, as noticed from the past.
- FLUXTNNN does not handle rates titles properly in its output
- Trajectory information is often needed on plots, and is currently handled by two versions of a program which has hard coded numbers which are added with each special request (for time-history). For spectra, trajectory info. if used is a plot program input.

Plots and/or listings and/or calculations are final deliverables.
(Drafting quality)

```
-----alpha,proton spectra p10,p11,v1,v2,i8,(i3,ha,hb)
      oxygen spectra      p10,v1,v2,(p11)
Spectra may be many individual time periods, or quarterly spectra for
year time ranges, multiple satellite/time comparisons;
(For the 1990 agu meeting, FMCD requested proton spectra for 78 time
periods in 1989- 1990 for V1,V2,P10,P11. Later he added helium spectra.)
John does 3-26 day sums which go forward in time by one 26 day period
```

```
-----26 day average time-histories p10,p11,v1,v2,i3,i8,(ha,hb)
                                         pen rates + std a,p,o
```

```
-----5 day moving averages      p10,p11   r2a+r3a
                                         (v1,v2   low he, high he
```

```
-----daily averages           p10,p11,v1,v2  "modified low sets"
```

pen rates v1,v2 (low & high gain)
 -----6 hour averages v1,v2 4-9 mev electrons
 v1,v2 "standard low sets"
 -----radial gradients p10,v1,v2,i8,i3
 -----latitudinal gradients p10,v1,v2
 -----hysteresis p10,v1,v2,i8 (uses same datasets as
 26 day time-history plots)
 Option of changing symbol for each
 year requires separate program;
 also th format precludes pl3810
 -----trajectory data listings p10,p11,v1,v2
 -----solar wind data plots p10,p11,v1,v2, OMNI(I8)
 -----magnetic field data plots p10,p11,v1,v2, OMNI(I8)
 -----plots/fits in momentum, p10,p11,v1,v2 (so far)
 rigidity, total energy

standard bincard sets for FLUXPLOT are as follows:

For spectrum plots: helium and proton (HET only)

Voyager-1 pre 1981 data	xrpas.mcdv1003.data(v1bins)
Voyager-1 post 1981 data	xrpas.mcdv1003.data(v1bins82)
	xrpas.mcdv1003.data(v1nwbins)
	(current spectrum bins- 1/89)
oxygen	xrpas.mcdv1005.data(oxyspect)
oxygen	xrpas.mcdv1005.data(oxyspec)
	(mean HET I,II)
Voyager-2 pre 1982 data	xrpas.mcdv1003.data(v2bins)
Voyager-2 post 1982 data	xrpas.mcdv1003.data(v2binssp)
	(elim ET 6 ; 23sept86)
	xrpas.mcdv1003.data(v2nwbins)
	(current spectrum bins- 1/89)
oxygen	xrpas.mcdv1005.data(oxyspect)

For spectrum plots: helium and proton (HET and standard LET only)

Card order matters for PIOPLT for pioneer and helios

Pioneer-10 pre mid 1973 data	(none- but use LS3 and 6250)
Pioneer-10 post mid 1988	sb#pr.fluxplot.data(pfbins)
post mid 1973	xrpas.mcdpf001.data(allpf)
oxygen	xrpas.mcdpf001.data(oxyspect)
Pioneer-11	xrpas.mcdpf001.data(allpg1)
oxygen	xrpas.mcdpg001.data(oxyspect)
Helios-A	xrpas.lib.cntl(specab2)
Helios-B	xrpas.lib.cntl(specab2)
ISEE-3	xrpas.mcdic003.data(allicmc)

For spectrum plots: helium and proton (MED and LED only)

IMP-8	xrpas.mcdi8001.data(specboxs)
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For standard 26 day average datasets:

Voyager-1 pre 1981 data	sb#vg.lib.data(?)
Voyager-1 post 1981	sb#vg.lib.data(mcd26v19)
oxygen	xrpas.mcdoxy01.data(\$\$jclv1)
	(multistep job adding 2 modes)

```

Voyager-2 pre 1982      sb#vg.lib.data( ? )
Voyager-2 post 1982     sb#vg.lib.data(mcd26v29)
                        oxygen    xrpas.mcdoxy01.data($$jclv2)
                        (multistep job adding 2 modes)
Pioneer-10 pre mid 1973 sb#pr.lib.data(sp26bins) +6250
Pioneer-10 post mid 1973 sb#pr.lib.data(sp26bina) +penc
                        oxygen    xrpas.mcdoxy01.data($$jclpf)
Pioneer-11              cant find yet
Helios-A                sb#hl.lib.data(sp26bins)
Helios-B                (never done yet by pam)
IMP-8                   xrpas.mcdi8026.data($thbins3)
ISEE-3                  sb#ic.lib.data(ic26davg)

```

For other standard time-history bin requests:

see sb#vg.lib.plot(\$monflx1) (\$monflx2)

(May end 1990 - john has broken my whole jobs down into their component parts as mcgovern did ! so the above is no longer current.)
sb#pr.lib.clist(list26dy) p10,11
sb#pr.lib.clist(loadr2a) p10

2/22/89 FMCD WANTS THIS ADDED TO MONTHLY PLOTS:

- PIONEER-10 FLUXPLOT JOBS AND CREATION OF PLOT DATASETS :
 SB#PR.LIB.DATA(\$P10LOW) STAB SUBMIT
 PLOTS ARE MADE BY EXECUTING:
 xrpas.mcdplt03.data(\$pf glow) example

For other time-history bin requests:

```

/* LATE 1989 ADDITIONAL PLOTS WHICH FMCD HAS BEEN REQUESTING
/*
- PIONEER-10 5 DAY MOVING AVGS, R2A+R3A (FLUXPLOT BY KRISTIN)
  PLOTS ARE MADE BY EXECUTING:
  SB#PR.PLOT.DATA($$Rplot)
- PIONEER-11 5 DAY MOVING AVGS, R2A+R3A (FLUXPLOT BY KRISTIN)
  PLOTS ARE MADE BY EXECUTING:
  SB#PR.PLOT.DATA($$RGPLT)

```

MODIFIED 'LOW' ENERGY REQUESTS:

- VOYAGER-1 FLUXPLOT AND PLOT JOBS COMBINED :
 SB#VG LIB.PLOT(\$ZSPV189) STAB SUBMIT
- VOYAGER-2 FLUXPLOT AND PLOT JOBS COMBINED :
 SB#VG LIB.PLOT(\$ZSPV289) STAB SUBMIT
- PIONEER-10 FLUXPLOT JOBS AND CREATION OF PLOT DATASETS :
 SB#PR LIB.DATA(\$ZSPPF89) STAB SUBMIT
 PLOTS ARE MADE BY EXECUTING:
 SB#PR.PLOT.DATA(\$\$TPLOT)
- PIONEER-11 FLUXPLOT JOBS THROUGH PLOTS:
 SB#PR LIB.DATA(\$ZSPPG89) STAB SUBMIT
- PIONEER-11 FLUXPLOT JOBS AND CREATION OF PLOT DATASETS :
 SB#PR LIB.DATA(\$P11LOW) STAB SUBMIT
 PLOTS ARE MADE BY EXECUTING:
 xrpas.mcdplt03.data(\$pf glow) example
- Voyager-1,-2 sb#vg.lib2.plot(\$monflx1) (\$monflx2)
 PLOTS ARE MADE BY EXECUTING:
 xrpas.mcdplt03.data(\$pf glow) example

For standard radial gradients

Voyager-1	pre 1981	gradient (rad) xrpas.mcdv1003.data(gradbins) orig.
Voyager-1	post 1981	gradient (rad) xrpas.mcdv1003.data(gradv1sp) (calcs after 1982; HET I prob.)
Voyager-2	pre 1982	gradient (rad) xrpas.mcdv1003.data(gradbins) orig. (calcs prior to 23sept86)
Voyager-2	post 1982	oxygen (rad) xrpas.mcdoxy01.data(vbins) gradient (rad) xrpas.mcdv1003.data(gradv2sp) (elim ET 6 ; 23sept86)
Pioneer-10	pre mid 1973	
Pioneer-10	post mid 1973	gradient xrpas.mcdpf001.data(gradbins) gradient xrpas.mcdpg001.data(oxygrads)
Pioneer-11		gradient xrpas.mcdpg001.data(gradbins) gradient xrpas.mcdpg001.data(oxygrads)
IMP-8		gradient xrpas.mcdi8001.data(\$i87778g) (example of bins)
ISEE-3		gradient xrpas.mcdic003.data(gradbins)

For standard latitudinal gradients

Voyager-1	pre 1981	
Voyager-1	post 1981	gradient (lat) xrpas.mcdv1005.data(v1spgrad)
Voyager-2	pre 1982	
Voyager-2	post 1982	gradient (lat) xrpas.mcdv1005.data(v2spgrad)

For the gradient work, bin card order and number must be
consistent for other needed software to work properly.

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sizes in existing "granularity" (extrapolated from 1989 census)
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H-A	FLUX	1250 MB
H-B	FLUX	730 MB
I-8	FLUX	740 MB
I-8	FLEX	740 MB
I-8	SMCT	600 MB
I-7	FLUX	270 MB
I-7	FLEX	270 MB
I-7	SMCT	450 MB
I-6	FLUX	154 MB

round to 30 GB

Auxilliary data needed: trajectory
solarwind
magnetic field

sizes(character datasets of selected parameters):

- 2) fluxplot functions (see problem enumeration elsewhere)

- a. V/I
P/H
IMP fluxplot
rateplot (using SMCT)
 - b. Mavplot -> movavg (using ft31,32 of fluxplot as input)
 - c. Matrix functions (e.g. consistency options)
- 3) Pioneer Background Calculation method.
 - a. Very cumbersome mainframe procedure which is limited by the design of the FLUX CATALOG
 - 4) get to standard plot dataset format if not provided by fluxplot function
 - a. ex. FLUXTNNN, GETDATA, PIOPILOT
this style of dataset has readable dates for listing data
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ACE has no direct way of handling time on the X axis
(at Pam's current level of understanding of the program)
so times must be in fractional years for ex.

- 5) work out a method to edit standard ACE model parameter files, or create them, in order to ultimately produce plots from a batch command capability in ACE.

- a. work out how to combine shell script methodology with data plotting to do volume work in background.
- b. the experience so far shows that the Post Script printer loses plots if too many are spooled to it, even if lpr's are requested from post script plot files.

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- 14) Helios orbital information/plotting ?

Questions needing answers:

- What data will reside where? For small tapes, what software is to be used to archive and read them? How will we keep track of what data is where?

Voyager ENCY
 LIB

ISEE ENCY
 LIB

Pioneer FLUX
 6250
 PENC
 PHA
 RATE

Helios FLUX
 6250
 PHA
 RATE

IMP ENCY
 CNTS
 PHAS
 SMCT
 MATR
 LOWG
 VLET
 FLUX
 FLEX

- Do we make IBM format data or IEEE format data with the local production programs. - PRODUCTION
 - a. must consider access to entire database, and minimize piecemeal/cut/paste steps in analysis work. (let's not do part on mainframe and part locally, ie, I can download a catalog or upload a catalog and use it either place without worrying about IEEE/IBM read problems. If I get to a place where I am routinely doing production locally, I can still upload data to the mainframe and use existing software there to analyze it if I can add it to existing databases.)
 - b. to use all IEEE, each tape type must be individually considered, and real words located and converted in download process. This is a large piece of work- whereas to produce IBM format is simple NOW and the future data "% of whole database" does not (in Pam's opinion) warrant IEEE conversion effort at this time.
- How are the production databases to be segmented when files are produced (as opposed to tapes).
 - a. What is the optimum file size if UNITREE is used?
(ftp)
 - b. Software must be changed to properly access segmented data.

- (if changed catalogs, or no catalogs)
 - (what about redo data)
 - (if any software is written with assumptions about input/output segmentation)
- If we are going to make 'higher granularity' databases available for local analysis, how will that be done?
If we have to write software to do this then these local higher granularity databases CAN be IEEE.
- a. can we simply add up records of existing FLUX, ENCY format data to produce data of the same format? These decisions affect, for ex. how a port of the IMP FLUXPLOT would be done.
(will we see word overflows in an add-up process)

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voycrs:pam

revise.milestones.fy94

Thu Nov 17 17:36:38 1994

lw / LaserJet 4

lw voycrs:pam Job: revise.milestones.fy94 Date: Thu Nov 17 17:36:38 1994

lw voycrs:pam Job: revise.milestones.fy94 Date: Thu Nov 17 17:36:38 1994

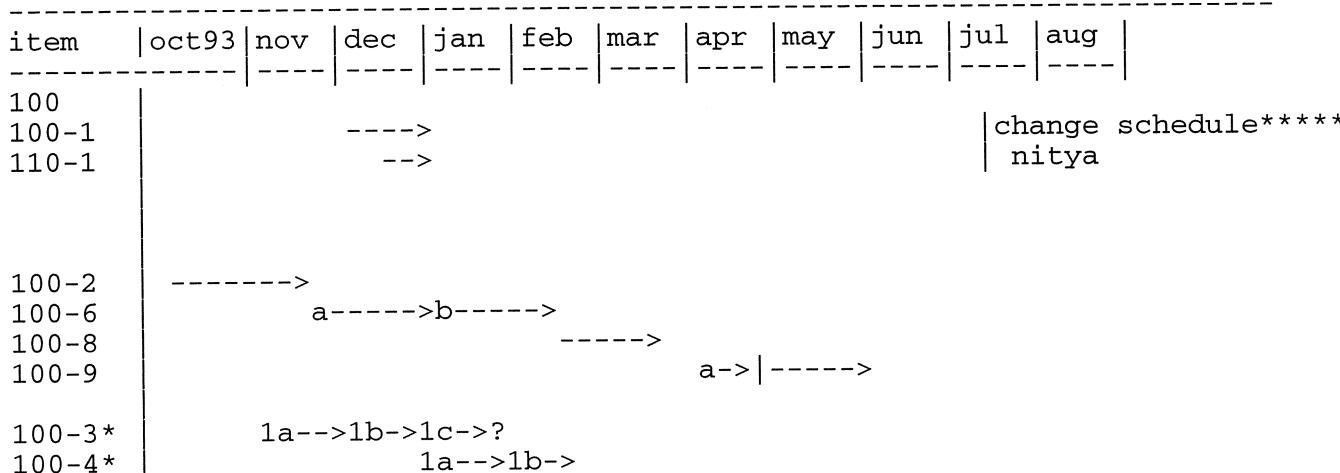
lw voycrs:pam Job: revise.milestones.fy94 Date: Thu Nov 17 17:36:38 1994

lw voycrs:pam Job: revise.milestones.fy94 Date: Thu Nov 17 17:36:38 1994

4.0 Milestones

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- nitya
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 - 110-2 New analysis tools software documentation (bincard input tool and plot tool)
 - 100-2 port of Voyager status list program
 - 100-3 develop method of plotting time-history standard text plot datasets using ACE/gr to replace/augment the PL3800 mainframe plot program options- batch mode plotting.
 - 100-3a source code segment(allow plot options and modify ACE parameter files)
 - 3b CLIST type methodology replacement (PERL or other tool)
 - 3c add trajectory scale handling(if timely)
 - 100-4 develop method of plotting spectrum data standard text plot datasets using ACE/gr to replace/augment the PL3810 mainframe plot program options- batch mode plotting.
 - 100-4a source code segment(allow plot options and modify ACE parameter files)
 - 4b CLIST type methodology replacement (PERL or other tool)
 - 100-5 develop method of plotting spectrum data standard text plot datasets using ACE/gr to replace/augment the HYST mainframe plot program options- batch mode plotting.
 - 100-5a source code segment(allow plot options and modify ACE parameter files)
 - 5b CLIST type methodology replacement (PERL or other tool)
 - 100-6 Take FLUX catalog responses from the mainframe datasets and create separate tables in local directory structures. (eliminate FLUX catalog design limitations- preparatory to Pioneer background calculation development).
 - 6a Pioneer response tables
 - 6b Voyager response tables
 - 100-7 Study feasibility of reformatting Pioneer FLUX databases into a Voyager like Encyclopedia format.
 - 7a design phase if feasible
 - 7b code/test phase if feasible
 - 100-8 Port the Voyager SRDLST (trajectory listing) program to the local workstation
 - 100-9 Port the Voyager EDRLIST (EDR listing) program to the local workstation
 - 9a convert EXHEAD assembler to FORTRAN



100-5*
100-7

1a->1b->
-->a-->b----->

320-1 -john local workstation production procedures as needed ----->
325-1 (move databases to local workstation ?)

200 >----->
310 >----->
330 >----->
400 >----->
500 >----->

* start times for these are contingent on potential special
request conflict priorities

5.0 RESOURCES

HSTX estimates that this task will require 1.5 senior analyst
programmers, and 1 junior analyst programmer through the fiscal year
1994.

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General needs:

- we need to define how the local systems will be structured. analogous to the mainframe project id, libcntl, libclist, libdata etc. ideas. We also need to establish group access restrictions. But the group restrictions must not hinder us from accessing files under project userid's.
- we need some kind of small tape archive system. If data is reprocessed, how will we know which tape has the current version.
 - what tape software will we use, and when can we start moving data to local small tapes.
 - we will need a list facility for the log file of these tapes
 - we will need a maintenance facility for the log file
- we need some perl type (or other) utilities to help locate, list, files for maintenance

Utility type software functions need to be ported but depend on the final system designs.

- ? for Voyager - will we still have the LOG
(&ISEE)
 - loglist
 - redolib (etc)
 - dirfix (& variations)
 - will we still use the OWLT and SC31,32 tables
 - TOEBCD path
 - JPL clist path
 - is the FLUX CATALOG still going to be the same format.
 - responsi
 - installv (catman utilities - no source?)
 - (installc)
 - overlay
 - modgeom
 - modtrack
 - ranges
 - testm
 - bxgnew
 - edrlist (assembler routine EXHEAD)
 - sdrlst (trajectory)
- } new other special applications
- ? for Pioneer - will we have a DRS type catalog
(&Helios)
 - drsmt
 - is the FLUX CATALOG still going to be the same format. (has implications for background correction procedure)
 - responsh
 - installh
 - background calculation software
 - flxmnt (david's version is not utilizing a FLUX CATALOG, and assumes hard coded file names)
 - traject (helios trajectory)
- Review David's stuff 'hard coded'
- ? for IMP
 - gain/finegain software/procedures
 - listgn

```
fglist  
fgbild  
gainad  
(other )  
  
final tape catalog format -> needed utilities  
maintcat  
readcat (3 varieties)  
blankcat  
(other )
```

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voycrs:pam

paths

Thu Dec 16 13:40:21 1993

lw / LaserJet 4

lw voycrs:pam Job: paths Date: Thu Dec 16 13:40:21 1993

lw voycrs:pam Job: paths Date: Thu Dec 16 13:40:21 1993

lw voycrs:pam Job: paths Date: Thu Dec 16 13:40:21 1993

lw voycrs:pam Job: paths Date: Thu Dec 16 13:40:21 1993

Current pathways for making standard type listings/plots -----

Fluxes/Rates are the most common data products requested. To obtain these quantities, the FLUXPLOT programs are normally run. Additional post-FLUXPLOT processing is frequently required, as for example, oxygen fluxes whose energy range crosses a MODE card boundary, where an additional step is required to calculate the final flux from its components. Background correction is another example. These additional steps are most often done after a plot dataset has been created from original FLUXPLOT output. With the exception of IMP, the plot capabilities of these programs are no longer used.

Our most heavily used plot programs require character input datasets of very simple format, with data input by FORTRAN reads. These programs plot data on the IBM 3800 laser printer and are called PL3800 (time-history plots) and PL3810 (spectrum/rigidity etc. plots)

PATHS :

26-day time history:

Vers1. FLUXPLOT (ft30) -> FT303132 (ft3132) ->
FLUXTNNN (plot data set as member of PO) ->
PL3800

Vers2. FLUXPLOT (ft3132) ->
 FLUXTNNN (plot data set as member of PO) ->
 PL3800

IMP. FLUXPLOT (ft3132) ->
FLUXTNNN (plot data set as member of PO) ->
REDATE (plot dataset as a PS dataset) ->
PL3800
(pen rates must be renormalized before plotting)

5-day moving averages:

Vers1.,2. FLUXPLOT (ft30) -> MAVPLOT (outmav) ->
REFORM (plot data set as PS dataset (REFORM very limit
-> PL3800
(I dont remember that IMP can still make ft30; older version can)

Spectrum plots:

Vers1. FLUXPLOT (ft07) -> PIOPILOT
(plot data set as PS dataset)
-> PL3810

Vers2. FLUXPLOT (ft07) -> PIOPLT (hardly ever used)
 (plot data set as PS dataset)
 -> PL3810
FLUXPLOT (ft3132) -> GETDATA (mostly done now)

```
(plot data set as PS dataset)
-> PL3810
```

```
IMP.    FLUXPLOT (ft3132) -> GETDATA
        (plot data set as PS dataset)
        -> PL3810
```

Radial Gradients:

```
trajectory info +
ft07,ft3132,other -> MODUGRAD (listings output and hand plotted)
```

Latitudinal Gradients:

```
radial gradient fit p10/v2 +
V1,V2 ft3132 + trajectory information
-> ACTRGRAD (listings output and hand plotted)
```

Trajectory data:

Pioneer CLIST traject submits a small program specifically requesting certain parameters, which are listed to SYSOUT or a dataset.

Helios Mostly complete listings exist of certain parameters,

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Member to enumerate standard mcd requests

Current pathways for making standard type listings/plots -----

Fluxes/Rates are the most common data products requested. To obtain these quantities, the FLUXPLOT programs are normally run. Additional post-FLUXPLOT processing is frequently required, as for example, oxygen fluxes whose energy range crosses a MODE card boundary, where an additional step is required to calculate the final flux from its components. Background correction is another example. These additional steps are most often done after a plot dataset has been created from original FLUXPLOT output. With the exception of IMP, the plot capabilities of these programs are no longer used.

FLUX generation programs: FLUXPLOT + the IMP FLUXPLOT

PROGRAM	OUTPUT DATASET FORMATS USED
1) Pioneer/Helios version	ft30,ft07
2) Voyager/ISEE version	ft30,ft3132,ft07
3) IMP program	ft3132

Although IMP produces ft3132, its input is completely different from V/I/P/H input cards.

Our most heavily used plot programs require character input datasets of very simple format, with data input by FORTRAN reads.

These programs plot data on the IBM 3800 laser printer and are called PL3800 (time-history plots) and PL3810 (spectrum/rigidity etc. plots) and HYST (hysteresis).

PATHS:

26-day time histories:

This data is always quiet time. The FLUXPLOT program input includes data exclude times. We keep long lists of 'standard' exclude times, however, depending on particle and energy bin, we often need to localize additional exclude time(s) for specific requests. In the past, because of time constraints, we also have simply set solar flare contaminated points to zero.

Vers1. FLUXPLOT (ft30) -> FT303132 (ft3132) ->
 FLUXTNNN (plot data set as member of PO) ->
 PL3800
(sometimes data must be renormalized before plotting)

Vers2. FLUXPLOT (ft3132) ->
 FLUXTNNN (plot data set as member of PO) ->
 PL3800
(sometimes data must be renormalized before plotting)

IMP. FLUXPLOT (ft3132) ->
 FLUXTNNN (plot data set as member of PO) ->
 REDATE (plot dataset as a PS dataset) ->
 PL3800
(sometimes data must be renormalized before plotting)

In 1992 another IMP FLUXPLOT version was made which allows the user to input a flux box and flux level for determining what is solar flare contamination. Currently we use the 24-28 MeV proton box, and determine the flux cut off level depending on the time within the solar cycle. These cut off levels are good typically for 6 month to 1 year time frames. Even with

this method of excluding data, we still end up with particle and energy ranges needing additional work to get good quiet time flux values.

5-day moving averages:

```
Vers1.,2. FLUXPLOT (ft30) -> MAVPLOT (outmav) ->
    REFORM (plot data set as PS dataset (REFORM very limited)
            -> PL3800
```

(I dont remember that IMP can still make ft30; an older version can)

Spectrum plots:

These data may be quiet time or not. If so, the standard, and additional exclude times are used as FLUXPLOT inputs.

```
Vers1. FLUXPLOT (ft07) -> PIOPILOT (various corrections to ft07
    and user supplies data stop time to PIOPILOT job)->
    hand background correction if requested ->
    (plot data set as PS dataset)
            -> PL3810
```

In certain Pioneer data, we can obtain flux values only from the FT06 FLUXPLOT output. This non-standard LET data is written to FT06 (normally a SYSOUT) and then reformatted into standard plot dataset format, and added to higher energy data via CLIST. This data is also selectively background corrected, but by an entirely different method than the 30-56 MeV H region.

```
Vers2. FLUXPLOT (ft07) -> PIOPILOT           (hardly ever used)
    (plot data set as PS dataset)
            -> PL3810
    FLUXPLOT (ft3132) -> GETDATA           (mostly done now)
    and user supplies data stop time in another step->
    (plot data set as PS dataset)
            -> PL3810
```

```
IMP.    FLUXPLOT (ft3132) -> GETDATA
    and user supplies data stop time in another step->
    (plot data set as PS dataset)
            -> PL3810
```

Fits/plots in rigidity, momentum, total energy

The GLSWS program was combined with software which takes standard spectrum type datasets and converts fluxes to rigidity, momentum etc, and then fits the data according to a user input function. Points can be excluded.

Fits are output to standard plot datasets of the spectrum type for plotting.

Other software can extract the fit values and create a time-history type dataset for plotting the fit parameters.

In the past we have also used a variation of this fitting with time-history format input as well.

Flux ratios:

We have software which can take flux ratios from either spectrum or time-history type datasets of assumed bin orders, and make these calculations.

Ratios can be plotted.
Other software can extract the ratio values and
create a time-history type dataset for plotting the
values.

Hysteresis: The standard 26 day plot datasets are used by
a special program which plots only points from
two input datasets which are of the same time.

Radial Gradients:

```
trajectory info + (background corrections) +
ft07,ft3132,other -> MODUGRAD (listings output and plot datasets)
The current version of MODUGRAD uses as many as
4 time periods for up to 3 satellites, using standard
gradient/modulation bin sets, calculates a radial
gradient and uses that gradient in a modulation
calculation. A correction to the low energy helium
fluxes is done for both the gradient and modulation
based on the ~120-160 MeV penetrating helium flux.
A MODE boundary crossing add function is also written
into MODUGRAD for the standard galactic oxygen bin.
```

Latitudinal Gradients:

```
radial gradient fit p10/v2 or actual values-predetermined and
set up as card input +
V1,V2 ft3132 + trajectory information
-> ACTRGRAD (listings output and hand plotted)
```

The latitudinal gradient procedure is a very piecemeal
one. It is complicated by the need to correct the Pioneer
30-56 MeV H bin by hand (effectively) for cases where
contiguous period gradient values are requested for many
contiguous times.

Trajectory data:

Pioneer/	Small programs with which a user can specifically request certain parameters, which are listed to SYSOUT or a dataset.
Voyager	The mainframe can produce, through a specialized plot program, a trajectory scale which we have in the past cut/pasted to the plots. The programs are matched so that plot and traj. produce the same x axis lengths.
	In 1993 the ACE program can be used to put trajectory data on time history plots OK, with some limitations (basically, assumed linearity of speed with time, although the user can input specific tic locations, values and labels)
Helios	Mostly complete listings exist of certain parameters, Tapes are old, and likelihood of creating on-line list is not good. Andrew's orbit plot program has some trajectory position calculation capability.

Solar wind data: We have many years of hourly averages data (1977->)
for above list of satellites. Software makes
daily averages, plasma pressure calculations for
Pioneer, and outputs files in the standard time-history
character dataset format.

Magnetic field : We have many years of daily averages data (~1979->)
for above list of satellites. Software reformats

specific parameters, and outputs standard time-history character dataset format.

Plots and/or listings and/or calculations are final deliverables.

(Drafting quality)

-----alpha,proton spectra p10,p11,v1,v2,i8,(i3,ha,hb)
oxygen spectra p10,v1,v2,(p11)

Spectra may be many individual time periods, or quarterly spectra for
year time ranges, multiple satellite/time comparisons;
(For the 1990 agu meeting, FMCD requested proton spectra for 78 time
periods in 1989- 1990 for V1,V2,P10,P11. Later he added helium spectra.)
John does 3-26 day sums which go forward in time by one 26 day period

-----26 day average time-historys p10,p11,v1,v2,i8,(ha,hb)
pen rates + std a,p,o

-----5 day moving averages p10,p11 r2a+r3a
(v1,v2 low he, high he

-----daily averages p10,p11,v1,v2 "modified low sets"
pen rates v1,v2 (low & high gain)

-----6 hour averages v1,v2 4-9 mev electrons
v1,v2 "standard low sets"

-----radial gradients p10,v1,v2,i8,i3
-----latitudinal gradients p10,v1,v2

-----hysteresis p10,v1,v2,i8 (uses same datasets as
26 day time-history plots)
Option of changing symbol for each
year requires separate program;
also th format precludes pl3810

-----trajectory data listings p10,p11,v1,v2
-----solar wind data plots p10,p11,v1,v2, OMNI(I8)
-----magnetic field data plots p10,p11,v1,v2, OMNI(I8)

-----plots/fits in momentum, p10,p11,v1,v2 (so far)
rigidity, total energy

standard bincard sets for FLUXPLOT are as follows:

For spectrum plots: helium and proton (HET only)

Voyager-1	pre 1981 data	xrpas.mcdv1003.data(v1bins)
Voyager-1	post 1981 data	xrpas.mcdv1003.data(v1bins82)
		xrpas.mcdv1003.data(v1nwbins)
		(current spectrum bins- 1/89)
	oxygen	xrpas.mcdv1005.data(oxyspect)
	oxygen	xrpas.mcdv1005.data(oxyspec)
		(mean HET I,II)
Voyager-2	pre 1982 data	xrpas.mcdv1003.data(v2bins)
Voyager-2	post 1982 data	xrpas.mcdv1003.data(v2binssp)
		(elim ET 6 ; 23sept86)
		xrpas.mcdv1003.data(v2nwbins)
		(current spectrum bins- 1/89)
	oxygen	xrpas.mcdv1005.data(oxyspect)

For spectrum plots: helium and proton (HET and standard LET only)

Card order matters for PIOPLT for pioneer and helios

Pioneer-10	pre mid 1973 data	(none- but use LS3 and 6250)
Pioneer-10	post mid 1988	sb#pr.fluxplot.data(pfbins)
	post mid 1973	xrpas.mcdpf001.data(allpf)
	oxygen	xrpas.mcdpf001.data(oxyspect)
Pioneer-11		xrpas.mcdpf001.data(allpg1)
	oxygen	xrpas.mcdpg001.data(oxyspect)
Helios-A		xrpas.libcntl(specab2)
Helios-B		xrpas.libcntl(specab2)
ISEE-3		xrpas.mcdic003.data(allicmc)

For spectrum plots: helium and proton (MED and LED only)

IMP-8	xrpas.mcdi8001.data(specboxs)
-------	-------------------------------

For standard 26 day average datasets:

Voyager-1	pre 1981 data	sb#vg.lib.data(?)
Voyager-1	post 1981	sb#vg.lib.data(mcd26v19)
	oxygen	xrpas.mcdoxy01.data(\$\$jclv1)
		(multistep job adding 2 modes)
Voyager-2	pre 1982	sb#vg.lib.data(?)
Voyager-2	post 1982	sb#vg.lib.data(mcd26v29)
	oxygen	xrpas.mcdoxy01.data(\$\$jclv2)
		(multistep job adding 2 modes)
Pioneer-10	pre mid 1973	sb#pr.lib.data(sp26bins) +6250
Pioneer-10	post mid 1973	sb#pr.lib.data(sp26bina) +penc
	oxygen	xrpas.mcdoxy01.data(\$\$jclpf)
Pioneer-11		cant find yet
Helios-A		sb#hl.lib.data(sp26bins)
Helios-B		(never done yet by pam)
IMP-8		xrpas.mcdi8026.data(\$thbins3)
ISEE-3		sb#ic.lib.data(ic26davg)

For other standard time-history bin requests:

see sb#vg.lib.plot(\$monflx1) (\$monflx2)

(May end 1990 - john has broken my whole jobs down into their component parts as mcgovern did ! so the above is no longer current.)
sb#pr.lib.clist(list26dy) p10,11
sb#pr.lib.clist(loadr2a) p10

- PIONEER-10 FLUXPLOT JOBS AND CREATION OF PLOT DATASETS :
SB#PR.LIB.DATA(\$P10LOW) STAB SUBMIT
PLOTS ARE MADE BY EXECUTING:
xrpas.mcdplt03.data(\$pf glow) example

For other time-history bin requests:

```
/* LATE 1989 ADDITIONAL PLOTS WHICH FMCD HAS BEEN REQUESTING
/*
- PIONEER-10 5 DAY MOVING AVGS, R2A+R3A (FLUXPLOT BY KRISTIN)
PLOTS ARE MADE BY EXECUTING:
SB#PR.PLOT.DATA($$R PLOT)
- PIONEER-11 5 DAY MOVING AVGS, R2A+R3A (FLUXPLOT BY KRISTIN)
PLOTS ARE MADE BY EXECUTING:
SB#PR.PLOT.DATA($$RGPLT)
```

MODIFIED 'LOW' ENERGY REQUESTS:

- VOYAGER-1 FLUXPLOT AND PLOT JOBS COMBINED :
SB#VG.LIB.PLOT(\$ZSPV189) STAB SUBMIT
- VOYAGER-2 FLUXPLOT AND PLOT JOBS COMBINED :
SB#VG.LIB.PLOT(\$ZSPV289) STAB SUBMIT

- PIONEER-10 FLUXPLOT JOBS AND CREATION OF PLOT DATASETS :
SB#PR.LIB.DATA(\$ZSPPF89) STAB SUBMIT
PLOTS ARE MADE BY EXECUTING:
SB#PR.PLOT.DATA(\$\$TPLOT)

- PIONEER-11 FLUXPLOT JOBS THROUGH PLOTS:
SB#PR.LIB.DATA(\$ZSPPG89) STAB SUBMIT

- PIONEER-11 FLUXPLOT JOBS AND CREATION OF PLOT DATASETS :
SB#PR.LIB.DATA(\$P11LOW) STAB SUBMIT
PLOTS ARE MADE BY EXECUTING:
xrpas.mcdplt03.data(\$pf glow) example

- Voyager-1,-2 sb#vg.lib2.plot(\$monflx1) (\$monflx2)
PLOTS ARE MADE BY EXECUTING:
xrpas.mcdplt03.data(\$pf glow) example

For standard radial gradients

Voyager-1 pre 1981
gradient (rad) xrpas.mcdv1003.data(gradbins) orig.

Voyager-1 post 1981
gradient (rad) xrpas.mcdv1003.data(gradv1sp)
(calcs after 1982; HET I prob.)

Voyager-2 pre 1982
gradient (rad) xrpas.mcdv1003.data(gradbins) orig.
(calcs prior to 23sept86)

Voyager-2 post 1982
oxygen (rad) xrpas.mcdoxy01.data(vbins)
gradient (rad) xrpas.mcdv1003.data(gradv2sp)
(elim ET 6 ; 23sept86)

Pioneer-10 pre mid 1973

Pioneer-10 post mid 1973
gradient xrpas.mcdpf001.data(gradbins)

Pioneer-11	gradient	xrpas.mcdpg001.data(oxygrads)
	gradient	xrpas.mcdpg001.data(gradbins)
	gradient	xrpas.mcdpg001.data(oxygrads)
IMP-8	gradient	xrpas.mcdi8001.data(\$i87778g) (example of bins)
ISEE-3	gradient	xrpas.mcdic003.data(gradbins)

For standard latitudinal gradients

Voyager-1	pre 1981	
Voyager-1	post 1981	gradient (lat) xrpas.mcdv1005.data(v1spgrad)
Voyager-2	pre 1982	
Voyager-2	post 1982	gradient (lat) xrpas.mcdv1005.data(v2spgrad)

For the gradient work, bin card order and number must be
consistent for other needed software to work properly.

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EXAMPLE OF DOCUMENTING MEMBER FOR A BOW.

THIS WORK GENERATED:

```
236 V1,V2 FLUXPLOT JOBS -> 472 FT31,32 OUTPUT DATASETS  
                                236 FT07 DATASETS  
77 PF,PG FLUXPLOT JOBS -> 56 FT07 OUTPUT DATASETS AND  
                                21 FT06 OUTPUT DATASETS  
GETDATA2 STEP V1,V2      -> 236 OUTPUT PLOT FORMAT DATASETS  
PIO PLOT2 STEP PF,PG     -> 56 OUTPUT PLOT FORMAT DATASETS  
PF,PG FT06-> PLOT SEG. -> 21 PLOT SEGMENT DATASETS  
PF,PG BACKGROUND CORR. -> 21 BACKGROUND CORRECTED SEGMENT DATASETS  
DOYMRG 'COLLECT/EDIT'   -> 21 FINAL PLOT DATASETS , PF,PG (SUBSET)
```

APPROXIMATE STORAGE REQUIREMENT FOR DATASETS:

FT31,32	ABOUT 10-20 RECORDS OF 132 BYTES MAX	*236
(FT07 DATASET V1,V2	120 LINES * 137 BYTES/LINE (MAX)	*236)
FT07 DATASET PF,PG	60 LINES * 137 BYTES/LINE (MAX)	*56
FT06	10 LINES * 137 " (MAX)	*21
PLOT RELATED	20 LINES * 80 BYTES/LINE (MAX)	*355

TOTAL STORAGE = 623040 +(3,879,840)+ 460320 + 287700 + 568000
IS 1.8 MBYTES (5.5 MBYTES) (ACTUALLY LESS BECAUSE
FT07 & FT06 ARE VBA NORMALLY; PERHAPS 2/3 OF 1.8)

THE LARGE NUMBER OF DIFFERENT DATASET NAMES REQUIRED ARISES BECAUSE
THE INITIAL REQUEST WAS ADDED TO AS TIME WENT ON, AND REVISIONS/ AND
BACKGROUND CORRECTIONS, FOR EX. WERE NEEDED; ALSO FMCD WANTED TO SEE
INDIVIDUAL LET DATA AND MEAN OF LET DATA PLOTTED WITH DIFFERENT
SYMBOLS FOR STUDY PURPOSES.

----- XRPAS.MCD90AGU.DATA -----

THIS MEMBER ATTEMPTS TO DOCUMENT WORK DONE IN PREP. FOR THE 1990
AGU MEETING FOR DR. MCDONALD

TRAJECTORY DATA FOR POSTER TITLES WAS MADE USING MCDPLT02.DATA
MEMBER DISTNSP AND RDISTNSP. THIS VERSION WRITES 3 MONTH TRAJ. DATA
USING THE ARRAY POSITIONS AS DEFINED BY THE SOURCE.

THIS DATASET WAS USED IN CONJUNCTION WITH MEMBERS IN DATASET XRPAS.
LIB.CLIST WHICH WERE TRANSFERRED TO MCD90AGU AFTERWORDS. ALSO USED:
XRPAS.MCDPLT03.DATA AS FOLLOWS:

\$\$MULTYR		00000020
\$\$PLOTAP		00000030
\$\$PLTKAP		00000040
\$\$PL38D4	- > MAIN CLISTS FOR SUBMITTING PL3810 AND PL3800	00000050
\$\$SPC38A	PLOT JOBS	00000090
\$\$SPC38B	PLOT JOBS	00000090
\$\$SPECAP		00000100
\$\$SPEC38		00000110
\$\$SPEKAP		00000120
\$\$NOBOX		00000150
\$\$PLOTDOY		00000170
\$\$PLOTDO2	- > SEE DOYSPC4 MEMBER WHICH UTILIZES THESE	00000180
\$\$PLOTDO3	PLOT THE SPECTRA	00000190
\$\$PLOTDO4		00000200
\$\$PLOTLA2		00000200
\$\$303132	TRY TO GET SPECTRA THRU FT30 FAILED -> MERGE	00000300
\$\$90EL		00000330
\$\$90MAY31		00000340
\$\$90MA31A		00000350
\$\$90TH		00000360
BCKCORSP	BACKGROUND CORRECTION PROGRAM	00000370

BCKPF1		00000380
BCKPF2	- > BACKGROUND CORRECTIONS PF, PG	00000390
BCKPG1		00000400
BCKPG2		00000410
CARDIN		00000420
DOYBINPF		00000440
DOYBINPG		00000450
DOYBINS1		00000460
DOYBINS2		00000470
DOYBIN2A	- > FLUXPLOT BIN CARDS	00000480
DOYBNPFA		00000490
DOYBNPFB		00000500
DOYBNPGA		00000510
DOYBNPGB		00000520
DOYBNV2A		00000520
DOYBNV2C		00000520
DOYBNV2D		00000520
DOYDATA		00000530
DOYDATA1		00000540
DOYDATA2		00000550
DOYDATE	CONVERT DOY REQUESTS TO DATE REQUESTS FOR FLUXPLOT SI CARDS	00000560
DOYDUMMY		00000570
DOYDUMM1		00000580
MERGEP	REFORMAT FLUXPLOT FT06 INTO PLOT DATASET FORMAT	00000590
MODLTIME		00000610
MODLTIIMP	- > MODEL EXEC AND TIME CARD INPUT FOR CLIST DRIVERS	00000620
MODLTIPP	(METHOD ASSUMES NO SE CARD INPUT)	00000630

STAGE 1 WORK WAS DEFINITION OF ABOUT 30 V2 (ABOUT 2 V1) TIMES THRU 1989- 1990 EOD.

THE CLIST FLUXPLOT SUBMIT METHODOLOGY AND GETDATA/ PL3810 CLIST METHODOLOGY WAS DEVELOPED FOR THESE TIMES.

STAGE 2 WORK WAS DEFINED BY FMCD FOR ABOUT 25 PF,PG TIMES AND ABOUT THAT MANY V2,V1 TIMES . SEE MEMBER DOYDRIVE FOR THE SPECIFIC TIMES USED. AFTER THE INITIAL ^45 TIMES WERE RUN, FMCD WANTED THE SAME SPECIAL LET ANALYSIS DONE WHICH WAS USED FOR THE PIONEER ENCOUNTER PERIODS. HE PROVIDED A LISTING OF THE FLUXPLOT INPUT CARDS. THE OUTPUT DID NOT COME ONTO FT07, AND NAND WROTE THE MERGEP PROGRAM TO TRANSFORM FT06 OUTPUT INTO PLOT TYPE DATASET FORMAT, SO IT COULD BE INCLUDED VIA CLIST INTO THE EXISTING PLOT DATASETS.

THE PF,PG FLUXPLOT RUNS WERE DONE AGAIN SPECIFYING FT06 AS A DATASET. THEN THE MERGEP PROGRAM WAS RUN. THEN THE CLIST DOYMRG WAS RUN TO MERGE THE LET ANALYSIS INTO THE EXISTING PROTON SPECTRA DATASETS.

AT THE LAST MINUTE, FMCD DECIDED THAT A BACKGROUND CORRECTION TO THE LET ANALYSIS DATA NEEDED TO BE DONE. THE CORRECTION FACTORS FOR THE 4 ENERGY BINS WERE DETERMINED BY 4 QUIET TIME PERIODS. SEE ABOVE FOR MEMBER NAMES WHERE THESE CORRECTIONS ARE WRITTEN. THE FT06 REFORMED DATASETS WERE INPUT, ALONG WITH THE BACKGROUND CORRECTIONS TO A SMALL CORRECTION PROGRAM, AND THE Z6N DATASETS WERE THE CORRECTED DATA.

THEN THE DOYMRG STEP WAS RERUN , AFTER RENAMING THE ORIGINAL U DATASETS TO V DATASETS.

A LOOSELEAF PAPER RECORD OF REQUESTS EXISTS IN THE FMCD NOTEBOOK FOR THIS TIME. JOHN AND KRISTIN DID CERTAIN OTHER OF HIS TIMEHISTORY AND FULL SPECTRA REQUESTS.

THE NORMAL SEQUENCE OF CLIST EXECUTION WAS:

DOYDRIVE	SUBMIT THE VARIOUS FLUXPLOT JOBS
DOYGET	TRANSFORM FLUXPLOT OUTPUT TO PLOT DATASETS
DOYSPEC6	TRANSFORM FT06 OUTPUT TO PLOT DATASET FORMAT
(DOYBCKSP)	BACKGROUND CORRECT FT06 OUTPUT PLOT DATASETS

DOYMRG
DOYSPC4

MERGE FT06 DATA SETS WITH ORIGINAL PLOT DATASETS
MAKE THE VARIOUS PLOTS REQUESTED

DATASETS WERE SYSTEMATICALLY NAMED ACCORDING TO THE DATE AND DOY
SPECIFICATION FOR FLUXPLOT RUNS AS FOLLOWS:

&DSN = V1,V2,PF,PG		
&DSN&DOY.T	PF,PG	FT07 FLUXPLOT OUTPUT = PIOPLT2 INPUT
O&DSN&DOY	PF,PG	PIOPLT2 OUTPUT
P&DSN&DOY	PF,PG	EDITING PIOPLT2 OUTPUT AS REQUESTED/NEEDED IN TITLE CARDS, OR DATA
&DSN&DOY.Z	PF,PG	ORIGINAL FT06 DATASETS
&DSN&DOY.Z6	PF,PG	REFORMATTED FT06 DATASETS (MERGEP OUTPUT)
&DSN&DOY.Z6N	PF,PG	BACKGROUND CORRECTED Z6 DATASETS
U&DSN&DOY	PF,PG	FINAL PLOT DATASETS
(V&DSN&DOY	PF,PG	PLOT DATASETS BEFORE BACKGROUND CORRECTIONS)
&DSN&DOY.A	V1,V2	FT31,FT32 FLUXPLOT OUTPUT DATASETS
&DSN&DOY.AA		"
O&DSN&DOY	V1,V2	GETDATA2 OUTPUT
P&DSN&DOY	V1,V2	FINAL PLOT DATASETS
LA&DSN&DOY	V1,V2	FT31,FT32 FLUXPLOT OUTPUT DATASETS
LA&DSN&DOY.A		LA,LC,LD, LM FOR LET DATA
OLA&DSN&DOY	V1,V2	GETDATA2 OUTPUT , ETC LET DATA
PLA&DSN&DOY	V1,V2	FINAL PLOT DATASETS , ETC LET DATA

EACH OF THESE DATASETS SHOULD BE COPIED AS A MEMBER OF LIKE NAME INTO
THE MCD90AGU.DATA DATASET.

ABOUT AUG 1, 1990 FMCD WANTED TO REVISE THE RESPONSE TABLE GEOMETRY
FACTORS FOR THE VOYAGER LETS. THIS WAS DONE, AND NEW FLUX RUNS WERE
MADE. THE WORK IS DOCUMENTED IN DOYDRIVE AS DOYDRA2L, DOYGET AS
DOYGEA2L, DOYGEB2L AND IN DOYSPC4 AS \$PLOTLAN. THE DATASETS CREATED
FOR PLOTTING WERE:

LX&DSN&DOY	V1,V2	FT31,FT32 FLUXPLOT OUTPUT DATASETS
LX&DSN&DOY.A		LA,LC,LD, LM FOR LET DATA ETC AS LX
		LW,LY,LZ, LV FOR LET DATA
OLX&DSN&DOY	V1,V2	GETDATA2 OUTPUT , ETC LET DATA
PLX&DSN&DOY	V1,V2	FINAL PLOT DATASETS , ETC LET DATA +HET
QLX&DSN&DOY	V1,V2	FINAL PLOT DATASETS , ETC LET DATA ONLY

THE NEXT PHASE OF THIS WORK INVOLVED GENERATING HELIUM SPECTRA
ANALOGOUS TO THE PROTON SPECTRA. P10,11,V1,V2 SPECTRA WERE MADE:

&DSN.A&DOY1	V1,V2	FLUXPLOT OUTPUT FT31,32 DATA
&DSN.A&DOY1.A		
O&DSN.A&DOY1	V1,V2	GETDATA2 OUTPUT
P&DSN.A&DOY1	V1,V2	FINAL HET HELIUM DATA

LET DATA NAMED SYSTEMATICALLY AS ABOVE FOR PROTON LET : &DET
EXCEPT THAT THE LETTER W IS FIRST, EX WL FOR LW = LA
XL,YL,ZL,VL

&DET&DSN&DOY1	V1,V2	FLUXPLOT OUTPUT FT31,32 DATA
&DET&DSN&DOY1.A		
O&DET&DSN&DOY1	V1,V2	GETDATA2 OUTPUT
Q&DET&DSN&DOY1	V1,V2	FINAL LET HELIUM DATA

&DSN.A&DOY1.T	P10,11	FLUXPLOT FT07 OUTPUT
P&DSN.A&DOY1		FINAL HELIUM DATA

FOR THE HELIUM WORK, CLISTS HAVE NOT BEEN ENUMERATED YET. 9/10/90
OR TRANSFERRED TO MCD90AGU.DATA

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voycrs:pam

nitya

Mon Feb 6 20:25:59 1995

lw / LaserJet 4

lw voycrs:pam Job: nitya Date: Mon Feb 6 20:25:59 1995

lw voycrs:pam Job: nitya Date: Mon Feb 6 20:25:59 1995

lw voycrs:pam Job: nitya Date: Mon Feb 6 20:25:59 1995

lw voycrs:pam Job: nitya Date: Mon Feb 6 20:25:59 1995

List of items which a new worker would be doing over the next six months, if we get someone right away.

Pam feels that the tasks this person would do should require as little knowledge as possible of this area. Past experience has shown that gaining knowledge in this area enough to be really useful takes more time (thus money) than we have to invest. Therefore, the following work seems appropriate:

- 1) Update Voyager-1 and -2 UNITREE ENCY copies, and finish download to local storage. Verify the local database.
- 2) Bring the Pioneer-F and -G PENC/6250 data to local storage and verify
- 3) Assuming we soon have access to local CDROM writer, bring the Voyager LIB tape data to local CDROM.
- 4) ?? as an alternative to 3) possibly milestone item related to PL3810 / for ACE

The following tries to further specify the steps which would be needed to try to give a better feel for time expected to completion and the kinds of sub-items of work that would be needed:

- 1) Update Voyager-1 and -2 UNITREE ENCY copies, and finish download to local storage. Verify the local database.
 - a. Learn to use Nand's mainframe program which uses the LOG and keeps track of where it is in the transfer process. It also calls FTP from a FORTRAN program to do the transfer, and records success. It takes existing ENCY tapes and breaks them up into files of about 15 MB.
 - b. Add to UNITREE the next ENCYs which have filled up since Nand did the initial UNITREE work Jan2-12, 1994. Do not process the current filling ENCY. (Nand's Jan 1994 work brought data to about Sept, 1992)
 - c. (probably) delete from UNITREE the entire subdirectory where I/O access errors caused failure to stage 5 V-1 files (see attachment V1FTPLOG1) when Pam downloaded the V-1 UNITREE data to local storage last fall. Regenerate the whole subdirectory from the mainframe again.
 - d. Make sure the right local storage disk for that data has enough space left to add those 5 files, and then FTP them from UNITREE to local storage. All local directories and filenames are just exactly the same as those on UNITREE.
 - e. FTP the step b. new UNITREE data also to the local storage. See ~cosmicra/voyager/ftprecord files which are window logs of the FTP process to see how to log onto UNITREE and do the FTP's. The MGET command can be used to get whole subdirectories.
- II. The local V-1 data need to be verified. Nand and Pam think the CNTEVENT program is adequate. It counts PHA events for each data type and prints a summary. The exact form of this summarizing can be changed but probably does not need to be. The mainframe has a working version of this program already which Pam has worked with some last fall. Port this program to the SUN. It is just about a 150 line main program which builds onto LSELECT. John has previously ported LSELECT

to SUN. (you may have to redo some part of the local LSELECT because the test ENCY's John had to use were missing (verse 0's?) some data. Later Nand decided to keep the local ENCYs just the same in content as the mainframe tapes. I believe there was some kind of bug left to solve, and that it may have been related to this ENCY difference just mentioned. Check with Nand and John.)

- III. Use the CNTEVENT program to verify the entire Voyager-1 local ENCY database. Run local jobs and matching mainframe jobs. The printout from these jobs can be compared locally with the 'diff' command. Code some automation tools, such as CLISTS and scripts to help process the many jobs. Mainframe jobs can be set up to write their output to disk and copy the disk file to a PDS. The PDS can be mass downloaded with one FTP command. We have examples of FTP downloads which can be executed from a CLIST. A systematic mainframe and local CNTEVENT output file name convention combined with script/CLIST tools can make the comparison work very easy and much faster.
 - IV. Once the V-1 ENCY files have been verified, compress them locally. Move compressed subdirectories, if necessary, in such a way that space is used well while preserving the data time contiguousness as much as possible. We are finding that ENCY data will compress to about 1/3 it's original size.
 - V. After V-1 is finished repeat the same steps for Voyager-2 data.
 - . update V-2 UNITREE ENCY data with all full ENCY's except the current filling one.
 - . Allocate the V-2 directory(s) as needed locally and download the UNITREE data to local storage.
 - . Because of local storage space limits, probably run the verify process after each subdirectory is finished, and then compress the local data.
 - . As with V-1, pick exactly the same names for V-2 local subdirectories as Nand has used on UNITREE.
 - . When done, the entire V-2 ENCY data (except for the current 'working' ENCY on the mainframe) will be on local storage, in compressed form, and time ordered as best as can be while using space efficiently.
 - VI. Periodically we will make backup tapes for each filled 1 GB disk storage device using our new 8 mm EXABYTE tape drive. As soon as a CDROM writer becomes available locally, we will also put the local ENCY data onto CDROM. We will use TAR to backup data to tape. Presumably we can also use it for the CDROM(??)
- 2) Bring the Pioneer-F and -G PENC/6250 data to local storage and verify

This work can be only generally defined at this time. Concurrent study and determination of how to do this task will be needed.

- I. Develop and implement a way to break up Pioneer FLUX(=PENC/6250) data tapes on the mainframe into about the same size chunks as Nand did with Voyager, about 15 MB. (Use AFN rather than VOLUME? to establish which data is in each file) Use some similar subdirectory structure and file naming convention for local data. Pam has started this kind of effort for Helios data, which will be like the Pioneer FLUX data.
 - . note that this data also is VB data and MUST have the lrec1 and block descriptor words preserved in the write to disk and subsequent local FTP. (FTP strips off the block descriptor words for VB, VBS type mainframe files) We get around that limitation by making the mainframe

- VB datasets into U datasets in a separate step.
These databases are to be preserved locally in IBM format
- II. After the process is developed and tested, make the mainframe
recfm U data files; put them local and to UNITREE.
- III. Decide how to do a similar kind of verify process to Voyager,
possibly using FLXLST to build on in the testing method. We have
a version of FLXLST locally, but it may be restricted in how
it can be used compared to the mainframe version (requires some
small amount of study to see how to coordinate them; Pam thinks
the mainframe version will have to be changed to work on just
the 15 MB files produced in step II.) Code any script/CLIST
tools which may be needed for the verification and carry it out.
- IV. Do the verification.
Compress local data and move it to best use space and preserve
data time contiguity.
- V. Do both Pioneer-10 (F) PENC tapes and Pioneer-11 (G) 6250 tapes.
Make 8mm EXABYTE (and CDROM if possible) backup copies of
any final full storage devices.

- 3) Assuming we soon have access to local CDROM writer, bring
the Voyager LIB tape data to local CDROM.

This work can be only generally defined at this time. Concurrent
study and determination of how to do this task will be needed.

LIBRARY (LIB) tapes hold the EDR telemetry data received from JPL.
Each LIB tape is a multi-filed SL tape, and each file contains about
one week of telemetry data. The SL dataset name (DSN) which is written
into the SL file label, MUST be supplied to the system in order to
mount the LIB file on the mainframe. That dataset name is formed within
the Voyager software system from the VOL-SER of the EDR and other coding
supplied by the data tech when he informs the LOG that a new EDR is
available to be processed (in the EDRLOG production step).

. LIB files are VB and must be preserved as such locally

To move data from LIB tapes to disk files, the user must know the
correct SL DSN for each file. This must be handled in software.
We have a product, developed for the ISEE project (which is almost
exactly the same as Voyager for this part of the system), which
can be adapted for use in this task. It reads the LOG dataset and
can establish the expected SL file dataset name so that FTIO can
MOUNT it within the program. (see reference addon reblock\$\$DIR)
It can be modified to write data to disk.

Develop a method of getting files off the SL tapes and onto local
CDROM storage. Do this in such a way as to preserve the correlation
information currently maintained in the LOG dataset. I.E. we want to
know exactly what original JPL EDR tape is which CDROM file.
(If Nand uses the LOG in his ENCYGEN, then LOGLIST will be ported
to SUN, but John Katen should probably do that work)

We will have to discuss the local data verification process with
Nand.

Attachments of interest to above:

from directory ~pam/monthly/misc/stanwork

```
total 99
drwxr-xr-x 2 pam      other          512 Jan 31 20:03 .
drwxr-xr-x 4 pam      other          512 Jan 31 18:22 ..
-rw-r--r-- 1 pam      other           0 Jan 31 20:03 DIR
-rw-r--r-- 1 pam      other          4984 Jan 31 18:23 libdsn
-rw-r--r-- 1 pam      other          1256 Jan 31 19:09 lselect$$DIR
-rw-r--r-- 1 pam      other          5406 Jan 31 19:02 milestones.fy95
-rw-r--r-- 1 pam      other          2970 Jan 31 18:34 reblock$$DIR
-rwrxr-xr-x 1 pam      other          1027 Jan 31 18:34 storage$$DIR*
-rw-r--r-- 1 pam      other          14398 Jan 31 19:04 v1ftplog1
-rw-r--r-- 1 pam      other          64925 Jan 31 18:35 voyager.unitree.encys
```

This is a copy of ~cosmicra/voyager/ftprecord/voyager1.ftplog.ency0001
window record of ftp from unitree to local storage.

It shows the 5 files which could not be accessed in unitree.
They will need to be done over again from the mainframe step.
Probably it will be easiest just to delete the first directory, and
simply redo it all (Nand).

```
>> cosmicra >> rlogin voy386
Last login: Tue Sep 13 17:49:42 from voycrs
SunOS Release 4.1.3 (VOY386) #1: Tue May 17 19:58:44 EDT 1994
*****
```

THIS IS A US GOVERNMENT COMPUTER .. UNAUTHORIZED ACCESS IS AGAINST THE LAW.

```
*****
```

12/13/93: I moved gzip and company to /usr1/local/bin, including
the man pages. To get the most out of your systems, when
you have a chance, add /usr1/local/bin to your path
variables and /usr1/local/man to your MANPATH variables in
.cshrc, .profile, or .tcshrc (whichever applies to you). I
also set up an automounter schema on /usr1, /data, the
home directories, { and /usr/lang and /usr/local } on landshark.
Send a message to system if any weirdness occurs...these changes
should enhance the overall performance of the voynet cluster.

```
*****
```

If you have questions please contact: Rob Jenson Bldg 2, W230. Tel: 286-3016.

Pager: (301) 507-2066 E-mail: system@rosserv.gsfc.nasa.gov.

Welcome to a VOYAGER node:

Node name is : voy386

You have mail.

>> cosmicra >> df

Filesystem	kbytes	used	avail	capacity	Mounted on
/dev/sd1a	14994	5576	7919	41%	/
/dev/sd1g	276357	244356	4366	98%	/usr
/dev/sd1h	1338982	1097530	107554	91%	/home
/dev/sd1d	29981	1906	25077	7%	/var
/dev/sd2d	1413965	715493	698472	51%	/data
/dev/sd2g	192799	26536	166263	14%	/usr1
/dev/sd2h	42831	18410	24421	43%	/tftpboot
/dev/sd4g	962134	9	962125	0%	/local/cosmicra/voy1
/dev/sd5g	962134	9	962125	0%	/local/cosmicra/voy2
/dev/sd6g	962134	9	962125	0%	/local/cosmicra/voy3
/dev/sd7g	962134	9	962125	0%	/local/cosmicra/voy4
/dev/sd8g	962134	9	962125	0%	/local/cosmicra/pio1
/dev/sd9g	962134	9	962125	0%	/local/cosmicra/pio2
/dev/sd10g	962134	9	962125	0%	/local/cosmicra/hli7
/dev/sd11g	962134	117236	844898	12%	/local/cosmicra/i8i6
/dev/sd12g	962134	52921	909213	6%	/local/cosmicra/wrk1
/dev/sd13g	962134	10	962124	0%	/local/cosmicra/wrk2

>> cosmicra >> cd voy1

voy1: No such file or directory

>> cosmicra >> cd cosmicra/voy1

cosmicra/voy1: No such file or directory

>> cosmicra >> cd /local/cosmicra/voy1

/local/cosmicra/voy1

>> cosmicra >> ll

total 10

drwxr-xr-x 3 cosmicra cosmicra 512 Aug 8 23:24 .

drwxrws--x 12 cosmicra cosmicra 512 Jul 27 12:43 ..

drwxr-xr-x 2 root wheel 8192 Aug 8 23:24 lost+found

>> cosmicra >> mkdir v1

>> cosmicra >> cd v1

/local/cosmicra/voy1/v1

>> cosmicra >> mkdir ency.0001

>> cosmicra >> ll

total 3

drwxrwx--- 3 cosmicra cosmicra 512 Sep 14 18:18 .

drwxr-xr-x 4 cosmicra cosmicra 512 Sep 14 18:18 ..

drwxrwx--- 2 cosmicra cosmicra 512 Sep 14 18:18 ency.0001

>> cosmicra >> cd ency.0001

/local/cosmicra/voy1/v1/ency.0001

>> cosmicra >> ll

total 2

drwxrwx--- 2 cosmicra cosmicra 512 Sep 14 18:18 .

drwxrwx--- 3 cosmicra cosmicra 512 Sep 14 18:18 ..

>> cosmicra >> ftp dirac 1021

Connected to dirac.gsfc.nasa.gov.

220-

UniTree V1.7.6

220 dirac FTP server (UniTree+ Version 1.7.182 Mon Jun 27 09:40:06 CDT 1994) ready.

Name (dirac:cosmicra): xrpas

331 Password required for xrpas.

Password:

230 User xrpas logged in.

```

ftp> cd /u2/se2nl
250 UniTree CWD command successful.
ftp> dir
200 PORT command successful.
150 Opening ASCII mode data connection for /usr/unitree/unitree.1.7.5/bin/ddir (0 by
drwxr-xr-x 2 se2nl g664 DK common 8192 Oct 1 1992 .trash
drwxr-xr-x 31 se2nl g664 DK common 8192 Jan 2 1994 v1
drwxr-xr-x 41 se2nl g664 DK common 8192 Jan 2 1994 v2
drwxr-xr-x 3 se2nl g664 DK common 8192 Dec 29 1993 voyager
226 Transfer complete.
309 bytes received in 0.8 seconds (0.38 Kbytes/s)
ftp> cd v1
250 UniTree CWD command successful.
ftp> dir
200 PORT command successful.
150 Opening ASCII mode data connection for /usr/unitree/unitree.1.7.5/bin/ddir (0 by
drwxr-xr-x 2 se2nl g664 DK common 8192 Jan 2 1994 ency
drwxr-xr-x 2 se2nl g664 DK common 8192 Jan 2 1994 ency.0002
drwxr-xr-x 2 se2nl g664 DK common 8192 Jan 2 1994 ency.0003
drwxr-xr-x 2 se2nl g664 DK common 8192 Jan 2 1994 ency.0004
drwxr-xr-x 2 se2nl g664 DK common 8192 Jan 2 1994 ency.0005
drwxr-xr-x 2 se2nl g664 DK common 8192 Jan 2 1994 ency.0006
drwxr-xr-x 2 se2nl g664 DK common 8192 Jan 2 1994 ency.0007
drwxr-xr-x 2 se2nl g664 DK common 8192 Jan 2 1994 ency.0008
drwxr-xr-x 2 se2nl g664 DK common 8192 Jan 2 1994 ency.0009
drwxr-xr-x 2 se2nl g664 DK common 8192 Jan 2 1994 ency.0010
drwxr-xr-x 2 se2nl g664 DK common 8192 Jan 3 1994 ency.0011
drwxr-xr-x 2 se2nl g664 DK common 8192 Jan 3 1994 ency.0012
drwxr-xr-x 2 se2nl g664 DK common 8192 Jan 4 1994 ency.0013
drwxr-xr-x 2 se2nl g664 DK common 8192 Jan 4 1994 ency.0014
drwxr-xr-x 2 se2nl g664 DK common 8192 Jan 4 1994 ency.0015
drwxr-xr-x 2 se2nl g664 DK common 8192 Jan 4 1994 ency.0016
drwxr-xr-x 2 se2nl g664 DK common 8192 Jan 4 1994 ency.0017
drwxr-xr-x 2 se2nl g664 DK common 8192 Jan 4 1994 ency.0018
drwxr-xr-x 2 se2nl g664 DK common 8192 Jan 5 1994 ency.0019
drwxr-xr-x 2 se2nl g664 DK common 8192 Jan 5 1994 ency.0020
drwxr-xr-x 2 se2nl g664 DK common 8192 Jan 10 1994 ency.0021
drwxr-xr-x 2 se2nl g664 DK common 8192 Jan 10 1994 ency.0022
drwxr-xr-x 2 se2nl g664 DK common 8192 Jan 10 1994 ency.0023
drwxr-xr-x 2 se2nl g664 DK common 8192 Jan 10 1994 ency.0024
drwxr-xr-x 2 se2nl g664 DK common 8192 Jan 12 1994 ency.0025
drwxr-xr-x 2 se2nl g664 DK common 8192 Jan 12 1994 ency.0026
drwxr-xr-x 2 se2nl g664 DK common 8192 Jan 12 1994 ency.0027
drwxr-xr-x 2 se2nl g664 DK common 8192 Jan 12 1994 encytemp
drwxr-xr-x 2 se2nl g664 DK common 8192 Feb 12 1994 libtemp
226 Transfer complete.
2370 bytes received in 1.9 seconds (1.2 Kbytes/s)
ftp> cd ency
250 UniTree CWD command successful.
ftp> dir
200 PORT command successful.
150 Opening ASCII mode data connection for /usr/unitree/unitree.1.7.5/bin/ddir (0 by
-rw-r--r-- 1 se2nl g664 AR common 15760680 Jan 2 1994 V1023937.A024
-rw-r--r-- 1 se2nl g664 AR common 15735556 Jan 2 1994 V1024295.A024
-rw-r--r-- 1 se2nl g664 AR common 15737824 Jan 2 1994 V1024626.A027
-rw-r--r-- 1 se2nl g664 AR common 15739964 Jan 2 1994 V1027777.A030
-rw-r--r-- 1 se2nl g664 AR common 15734060 Jan 2 1994 V1030364.A030
-rw-r--r-- 1 se2nl g664 AR common 15771852 Jan 2 1994 V1030931.A031
-rw-r--r-- 1 se2nl g664 AR common 15770304 Jan 2 1994 V1031423.A031
-rw-r--r-- 1 se2nl g664 AR common 15747588 Jan 2 1994 V1031840.A032
-rw-r--r-- 1 se2nl g664 AR common 15734604 Jan 2 1994 V1032355.A033
-rw-r--r-- 1 se2nl g664 AR common 1493520 Jan 2 1994 V1033027.A033
226 Transfer complete.
890 bytes received in 1.5 seconds (0.58 Kbytes/s)
ftp> binary
200 Type set to I.

```

```

ftp> mget *
mget V1023937.A024294? y
200 PORT command successful.
150 Opening BINARY mode data connection for V1023937.A024294 (15760680).
226 Transfer complete.
local: V1023937.A024294 remote: V1023937.A024294
15760680 bytes received in 23 seconds (6.6e+02 Kbytes/s)
mget V1024295.A024625? y
200 PORT command successful.
150 Opening BINARY mode data connection for V1024295.A024625 (15735556).
226 Transfer complete.
local: V1024295.A024625 remote: V1024295.A024625
15735556 bytes received in 1.8e+02 seconds (85 Kbytes/s)
mget V1024626.A027776? y
200 PORT command successful.
150 Opening BINARY mode data connection for V1024626.A027776 (15737824).
226 Transfer complete.
local: V1024626.A027776 remote: V1024626.A027776
15737824 bytes received in 31 seconds (5e+02 Kbytes/s)
mget V1027777.A030363? y
200 PORT command successful.
550 V1027777.A030363: I/O error.
mget V1030364.A030930? y
200 PORT command successful.
550 V1030364.A030930: I/O error.
mget V1030931.A031422? y
200 PORT command successful.
550 V1030931.A031422: I/O error.
mget V1031423.A031839? y
200 PORT command successful.
550 V1031423.A031839: I/O error.
mget V1031840.A032354? y
200 PORT command successful.
150 Opening BINARY mode data connection for V1031840.A032354 (15747588).
226 Transfer complete.
local: V1031840.A032354 remote: V1031840.A032354
15747588 bytes received in 34 seconds (4.5e+02 Kbytes/s)
mget V1032355.A033026? y
200 PORT command successful.
550 V1032355.A033026: I/O error.
mget V1033027.A033089? y
200 PORT command successful.
150 Opening BINARY mode data connection for V1033027.A033089 (1493520).
226 Transfer complete.
local: V1033027.A033089 remote: V1033027.A033089
1493520 bytes received in 2.5 seconds (5.9e+02 Kbytes/s)
ftp> dir
200 PORT command successful.
150 Opening ASCII mode data connection for /usr/unitree/unitree.1.7.5/bin/ddir (0 by
-rw-r--r-- 1 se2nl g664 DK common 15760680 Jan 2 1994 V1023937.A024
-rw-r--r-- 1 se2nl g664 DK common 15735556 Jan 2 1994 V1024295.A024
-rw-r--r-- 1 se2nl g664 DK common 15737824 Jan 2 1994 V1024626.A027
-rw-r--r-- 1 se2nl g664 AR common 15739964 Jan 2 1994 V1027777.A030
-rw-r--r-- 1 se2nl g664 AR common 15734060 Jan 2 1994 V1030364.A030
-rw-r--r-- 1 se2nl g664 AR common 15771852 Jan 2 1994 V1030931.A031
-rw-r--r-- 1 se2nl g664 AR common 15770304 Jan 2 1994 V1031423.A031
-rw-r--r-- 1 se2nl g664 DK common 15747588 Jan 2 1994 V1031840.A032
-rw-r--r-- 1 se2nl g664 AR common 15734604 Jan 2 1994 V1032355.A033
-rw-r--r-- 1 se2nl g664 DK common 1493520 Jan 2 1994 V1033027.A033
226 Transfer complete.
890 bytes received in 0.93 seconds (0.94 Kbytes/s)
ftp> pwd
257 "/u2/se2nl/v1/ency" is current directory.
----- after ency.0002 mget I tried gets on failures
-----in the mget of the ency directory
ftp> lcd v1

```

```

Local directory now /local/cosmicra/voy1/v1
ftp> lcd ency.0001
Local directory now /local/cosmicra/voy1/v1/ency.0001
ftp> dir
200 PORT command successful.
150 Opening ASCII mode data connection for /usr/unitree/unitree.1.7.5/bin/ddir (0 by
-rw-r--r-- 1 se2nl g664 DK common 15760680 Jan 2 1994 V1023937.A024
-rw-r--r-- 1 se2nl g664 DK common 15735556 Jan 2 1994 V1024295.A024
-rw-r--r-- 1 se2nl g664 DK common 15737824 Jan 2 1994 V1024626.A027
-rw-r--r-- 1 se2nl g664 AR common 15739964 Jan 2 1994 V1027777.A030
-rw-r--r-- 1 se2nl g664 AR common 15734060 Jan 2 1994 V1030364.A030
-rw-r--r-- 1 se2nl g664 AR common 15771852 Jan 2 1994 V1030931.A031
-rw-r--r-- 1 se2nl g664 AR common 15770304 Jan 2 1994 V1031423.A031
-rw-r--r-- 1 se2nl g664 DK common 15747588 Jan 2 1994 V1031840.A032
-rw-r--r-- 1 se2nl g664 AR common 15734604 Jan 2 1994 V1032355.A033
-rw-r--r-- 1 se2nl g664 DK common 1493520 Jan 2 1994 V1033027.A033
226 Transfer complete.
890 bytes received in 2.4 seconds (0.37 Kbytes/s)
ftp> binary
200 Type set to I.
ftp> get V1027777.A030363
200 PORT command successful.
550 V1027777.A030363: I/O error.
ftp> type i
i: unknown mode
ftp> binary
200 Type set to I.
ftp> get V1030364.A030930 V1030364.A030930
200 PORT command successful.
550 V1030364.A030930: No such file or directory.
ftp> dir
200 PORT command successful.
150 Opening ASCII mode data connection for /usr/unitree/unitree.1.7.5/bin/ddir (0 by
-rw-r--r-- 1 se2nl g664 DK common 15760680 Jan 2 1994 V1023937.A024
-rw-r--r-- 1 se2nl g664 DK common 15735556 Jan 2 1994 V1024295.A024
-rw-r--r-- 1 se2nl g664 DK common 15737824 Jan 2 1994 V1024626.A027
-rw-r--r-- 1 se2nl g664 AR common 15739964 Jan 2 1994 V1027777.A030
-rw-r--r-- 1 se2nl g664 AR common 15734060 Jan 2 1994 V1030364.A030
-rw-r--r-- 1 se2nl g664 AR common 15771852 Jan 2 1994 V1030931.A031
-rw-r--r-- 1 se2nl g664 AR common 15770304 Jan 2 1994 V1031423.A031
-rw-r--r-- 1 se2nl g664 DK common 15747588 Jan 2 1994 V1031840.A032
-rw-r--r-- 1 se2nl g664 AR common 15734604 Jan 2 1994 V1032355.A033
-rw-r--r-- 1 se2nl g664 DK common 1493520 Jan 2 1994 V1033027.A033
226 Transfer complete.
890 bytes received in 1.6 seconds (0.54 Kbytes/s)
ftp> binary
200 Type set to I.
ftp> get V1030364.A030930
200 PORT command successful.
550 V1030364.A030930: I/O error.
ftp> binary
200 Type set to I.
ftp> get V1030931.A031422
200 PORT command successful.
550 V1030931.A031422: I/O error.
ftp> quit
221 Goodbye.
>> cosmicra >> exit
>> cosmicra >> >> exit
>> logout
Connection closed.
>> whoami
pam
>>

```

```

total 56
drwxr-s--- 2 cfgmgr cosmicra      512 Jan 14 1994 .
drwxr-s--- 6 cfgmgr cosmicra      512 Jan 14 1994 ..
-rw-r---- 1 cfgmgr cosmicra      873 Jan 14 1994 FROMPAM
-rw-r---- 1 cfgmgr cosmicra     2443 Jan 14 1994 LOOKATME
-rw-r---- 1 cfgmgr cosmicra      998 Jan 14 1994 Makefile
-rw-r---- 1 cfgmgr cosmicra     1538 Jan 14 1994 PROGLOG
-rw-r---- 1 cfgmgr cosmicra     3524 Jan 14 1994 USERINFO
-rw-r---- 1 cfgmgr cosmicra     7332 Jan 14 1994 chpter.f
-rw-r---- 1 cfgmgr cosmicra     1147 Jan 14 1994 fmtccm.f
-rw-r---- 1 cfgmgr cosmicra     2993 Jan 14 1994 fmtrsm.f
-rw-r---- 1 cfgmgr cosmicra      359 Jan 14 1994 lcntl.f
-rw-r---- 1 cfgmgr cosmicra     3673 Jan 14 1994 listmn.f
-rw-r---- 1 cfgmgr cosmicra       50 Jan 14 1994 lselect.in
-rwxr----- 1 cfgmgr cosmicra     337 Jan 14 1994 lselect.run*
-rw-r---- 1 cfgmgr cosmicra     3088 Jan 14 1994 phaevn.f
-rw-r---- 1 cfgmgr cosmicra     1857 Jan 14 1994 phahis.f
-rw-r---- 1 cfgmgr cosmicra     4227 Jan 14 1994 prevrs.f
-rw-r---- 1 cfgmgr cosmicra     4735 Jan 14 1994 rawrte.f
-rw-r---- 1 cfgmgr cosmicra     6926 Jan 14 1994 volume.f

```

dataset for handling test procedures associated with
downloading voyager ency data to local storage/ and verify that

Members found in mainframe PDS 'xrpas.storage.data'

member		created	modified	init	now	
\$\$\$DIR		01.00	94/08/01	94/08/01	16:41	2 2 0 XRPAS
\$\$XRDMS		01.00	94/08/09	94/08/09	19:38	107 107 0 XRPAS
\$BCNTEV	build	01.02	94/10/06	94/10/06	17:00	14 14 0 XRPAS
\$LSELECT		01.00	94/08/01	94/08/01	16:45	25 25 0 XRPAS
\$RCNTEV	jcl	01.03	94/10/06	94/10/11	17:05	27 27 0 XRPAS
CNTEVENT	source	01.07	94/10/06	94/10/11	17:08	206 192 0 XRPAS
SE2NLCAT		01.00	94/08/05	94/08/05	21:29	350 350 0 XRPAS

From pam Wed Feb 2 19:09:45 1994

From: pam (Pam Schuster)

To: pam

Subject: library dsn returned

Nand, I have looked into your need of the LIBRARY DSN being returned by some routine, linked library block by linked block.
Do you want to process LIB tape by LIB tape rather than linked block by linked block?

Kristin wrote a small program in 1986 which was used to reblock the ISEE library tapes. It has all the functions in it that you need to locate the DSN (and more).

SB#IC.REBLOCK.FORT is on the mainframe and locally as
~cfgmgr/isee/source/IBM/reblock .

It looks easily adaptable to a mass processing run which would copy all library files of one tape to disk for processing to unitree, which is what I assume you have in mind. It will work on a tape by tape basis with just a little programming.

For a REAL mass job just replace the input tape, and file input which is read in by a card with a more automatic method (although you may not be able to establish how many files should be on the LIB tape without adding a separate routine to do that function specifically).

One warning- For ISEE there is at least one LIB tape which does not match the LOG expectation for number of files. I can't remember why just off the top of my head, but the LOG thinks there are more files than there actually are. Some kind of backup/restore problem created this circumstance, and there was a good reason at the time why it couldn't easily be fixed up. I don't know of that kind of circumstance in Voyager, but with my experience of backup/restore realities, I wouldn't assume anything in doing the mass file transfers.

You should also review the list of EDR blocks, especially because redo's occurred which will put the same base EDR characters in more than one place. The same care needs to be considered with respect to the EDR editing which has occurred for several years now. The same EDR name was mostly used for the edited EDR's which were then EDRSAVE'd. It would be wise to maintain the LOG EDR block number/LIB file correspondence SOMEWHERE in whatever you do in your naming conventions. John maintains a PDS member somewhere (libcntl?) which is suppose to document when an EDR is edited and what EDR block it ended up as. The original JPL EDR's are always EDRSAVE'd, but for those needing editing, they are immediately marked 'not to be processed' and then editing onto a scratch tape name occurs after the EDITSCAN process is completed.

All for now,
Pam

----- End Included Message -----

MEMBERS FOUND IN MAINFRAME PDS 'SB#IC.REBLOCK.FORT'

\$DOC	01.00	86/09/16	86/09/16	10:55	18	18	0	XRKAW
BUILD	01.08	86/07/01	86/09/16	10:39	14	14	0	XRKAW
DPJCL	01.01	86/09/23	86/09/23	13:49	14	14	0	XRKAW
JCL	01.45	86/07/01	86/09/26	15:02	14	12	0	XRKAW
LREAD								
MAIN	01.30	86/07/01	86/09/26	15:10	44	31	0	XRKAW
RDCOPY								
REDRBK	01.00	86/09/25	86/09/25	09:52	59	59	0	XRKAW
RLIBBK	01.19	86/07/01	86/09/25	09:52	39	42	0	XRKAW
RLIBCN	01.09	86/07/01	86/08/19	09:35	30	32	0	XRKAW

THE ISEE REBLOCK COPY PROGRAM WAS WRITTEN TO REDUCE THE IOEXCPS USED TO COPY ISEE LIBRARY TAPES.

K.WORTMAN SAR SEPTEMBER 15, 1986

NAME DESCRIPTION

MAIN MAIN PROGRAM
LREAD
RLIBCN READS LIBRARY CONTROL BLOCK
RLIBBK READS LIBRARY BLOCK
REDRBK READS EDR BLOCK
RDCOPY READS AND COPIES EACH FILE OF LIBRARY TAPE

NAME DESCRIPTION

SB#IC.REBLOCK.FORT VS FORTRAN PROGRAM AND JCL

SB#IC.REBLOCK.LOAD
SB#IC.LIB.CLIST(ISEE)

LOAD MODULE
PROMPTS USER, SETS UP JCL, AND SUBMITS JOB

COSMIC RAY SUPPORT
WORK CONTROL PLAN FOR FISCAL YEAR 1995
Task Assignment 66-003-A5
Date: November 8, 1994

The following projects are preliminary at this time. Others to be defined may take priority at a later date, as specified by GSFC.

- 110-1 Finish capability to plot time-history, spectra, hysteresis in the new local analysis tool software, and save the configuration of graphs and plots.
- 110-2 Port the special version of IMP FLUXPLOT which Dr. McDonald uses, after making a disk read version.
- 110-3 develop method of plotting time-history standard text plot datasets using ACE/gr to replace/augment the PL3800 mainframe plot program options- batch mode plotting.
- 110-3a source code segment(allow plot options and modify ACE parameter files)
 - 3b CLIST type methodology replacement (PERL or other tool)
 - 3c add trajectory scale handling(if timely)
- 110-4 develop method of plotting spectrum data standard text plot datasets using ACE/gr to replace/augment the PL3810 mainframe plot program options- batch mode plotting.
- 110-4a source code segment(allow plot options and modify ACE parameter files)
 - 4b CLIST type methodology replacement (PERL or other tool)
- 110-5 develop method of plotting spectrum data standard text plot datasets using ACE/gr to replace/augment the HYST mainframe plot program options- batch mode plotting.
- 110-5a source code segment(allow plot options and modify ACE parameter files)
 - 5b CLIST type methodology replacement (PERL or other tool)
- 110-6 Take FLUX catalog responses from the mainframe datasets and create separate tables in local directory structures. (eliminate FLUX catalog design limitations- preparatory to Pioneer background calculation development).
 - 6a Pioneer response tables
 - 6b Voyager response tables
- 110-7 Study feasibility of reformatting Pioneer FLUX databases into a Voyager like Encyclopedia format.
 - 7a design phase if feasible
 - 7b code/test phase if feasible
- 110-8 Port the Voyager SRDLST (trajectory listing) program to the local workstation
- 110-9 Port the Voyager EDRLIST (EDR listing) program to the local workstation
 - 9a convert EXHEAD assembler to FORTRAN

```

-----|----|----|----|----|----|----|----|----|----|
110
110-1      ----->
110-2      ----->
110-3*      1a-->1b->1c->?
110-4*      1a-->1b->
110-5*      1a->1b->

110-6      a----->b----->
110-8      ----->
110-9      a->|----->
110-7      -->a-->b----->

230-1      ---->(a) | <-----> Voyager-1 ENCY database from UNITREE
              -----><-----> Voyager-2 ENCY database from UNITREE
              ----->(b) | <--->IMP-6,7,8 FLUX databases ++ #
              -->(c)      * <---> IMP-7,8 FLEX databases ++ #
              -->(c)      * <---> IMP-6,7,8 SMCT databases ++ #
              -->(d)      * -----> Helios-A, 6250 FLUX data
                           * -----> Helios-B, 6250 FLUX data
                           * -----> Pioneer-10, PENC FLUX data
                           * -----> Pioneer-11, PENC FLUX data

320-1      -john local workstation production procedures as needed ----->

200      >----->
210-1      >---->|  Voyager cruise data for NSSDC submission
310      >----->
330      >----->
400      >----->
500      >----->

* start times for these are contingent on potential special
  request conflict priorities
(a) | about 75 MBytes of data were inaccessible in UNITREE
    and will need to be regenerated. All other data in
    UNITREE (thru VOLUME 551183) are now in local storage
(b) | all data have been downloaded to local storage thru I-8 reel 33
(c) all data have been written from tape to mainframe disk
  files, and will be downloaded after existing local data
  has been verified and compressed. One IMP-7 FLEX tape and
  3 IMP-6 SMCT tapes need to be recovered from backups.
++ <---> verification of data
#   These data are used by Dr. McDonald as a 1 AU reference.
(d) work has begun to develop mainframe disk files from the tapes

```

List of Voyager ENCYs on UNITREE:

Window log of session to list unitree ENCYs of Voyager- put there by
 Nand to his account about Jan 2 - 12, 1994

```

>>      pwd
/tmp_mnt/home/voy386/pam
>> telnet dirac
Trying 128.183.39.23 ...
Connected to dirac.gsfc.nasa.gov.
Escape character is '^]'.

```

WARNING: This system is for the use of authorized users only. All activities
 on this system are monitored and recorded by system personnel. Anyone using
 this system expressly consents to such monitoring and is advised that if

monitoring reveals possible evidence of criminal activity, system personnel may provide this evidence to law enforcement officials.

(dirac)

login: xrpas

Password:

Last login: Mon Jun 6 14:36:19 from voycrs.gsfc.nasa
Technical Assistance Group Bldg 28 Rm S201 tag@nccs.gsfc.nasa.gov
Call-in support 8:30AM 4:30PM, (301)286-CRAY/2729
Phone mail 24 hrs/day, reviewed during business hours (301)286-9120
System status: On NCCS systems enter 'STATINFO' or call (301)286-1392
NCCS online info: telnet to nccsinfo.gsfc.nasa.gov, login as nccsinfo
===== URGENT INFORMATION! as of 09:29 Tue, Jun 7, 1994

06/07 Some files put into UniTree via TCP/IP between May 11 and May 20 were corrupted. Users need to check their files. See the Gopher article "Some UniTree Files Corrupted Due to TCP/IP Buffer Problems May 11-20". Please contact the TAG if you have questions.

===== SCHEDULED SYSTEM UNAVAILABILITY as of 16:18 Tue, Jun 7, 1994

From--To System(s) -- Reason

06/08/94 0800--0830 Cray C98 -- Reboot to fix UltraNet problem.

===== GENERAL INFORMATION as of 14:18 Wed Jun 08, 1994

06/07 A new CF77 compiler was installed on the Cray on June 6 at 2 PM. If you have any problems with it, please contact the TAG.

06/06 The Convex operating system was upgraded to release 11 on May 11. The initial release of the OS did not include support for exabyte tapes. The NCCS expects exabyte tape support to resume by June 21.

===== Recent NCCSINFO Gopher Articles as of 17:07 Tue, Jun 7, 1994
See "What's New" in the NCCS Gopher

06/07 UniTree Files That May be Corrupted Due to Buffer Problems

06/07 Files Retrieved from UniTree When Buffer Problems Occurred

06/07 Some UniTree Files Corrupted Due to TCP/IP Buffer Problems May 11 to May 20.

06/06 Some Software in /bin/test on the Cray Installed Today, June 6

06/03 New TAG Hours are Monday to Friday, 08:30 - 16:30 Eastern Time

06/01 IVDEP Compiler Directive Differences on Cray C90 & Cray Y-MP Systems

06/01 Vectorization Bug in Default CF77 Compiler May Give Wrong Answers

05/31 Using Cray's Solid-state Storage Device (SSD) (updated)

05/27 New Software in /bin/test on the Cray

05/25 Overview of the NCCS Cray UNICOS Environment (updated)

05/23 Introduction to the vi Editor

05/23 Using FORTRAN 77 on the NCCS Cray

05/23 Goddard's Electronic Mail Reflector System (ERS)

05/20 Introduction to Unix

05/18 Summary of Useful User Support Contact Numbers

05/18 MVS-Specific FTP Settings (updated)

05/17 Use of the special NQS batch queue

05/17 Unix Book List

05/16 The Goddard Learning Center

05/13 NCCS Tape Export Utility: tapex (updated)

05/11 Building 28 Atrium Teas and Posters Schedule for June 1994

05/11 Changes Coming with the UNICOS 8.0 Operating System

o Please help keep the user database accurate and "chfn".

o Please do not use /usr/tmp.

o If you have multiple sponsors, please use the newacct command to direct billing to the correct sponsor.

TERM = (sun-cmd)

Wed Jun 8 15:59:43 EDT 1994

dirac [/u2/xrpas] % ls -alg /u2/se2nl/v1/ency.* > v1encys

/u2/se2nl/v1/: No such file or directory

dirac [/u2/xrpas] % ftp localhost 1021

Connected to localhost.gsfc.nasa.gov.

220-

UniTree V1.7.6

220 dirac FTP server (UniTree+ Version 1.7.6 Thu Apr 7 18:46:03 CDT 1994) ready.
Name (localhost:xrpas): xrpas
331 Password required for xrpas.
Password:
230 User xrpas logged in.
Remote system type is UNIX.
Using binary mode to transfer files.
ftp> ls -alg /u2/se2nl/v1/ency.*
/u2/se2nl/v1/ency.*: Bad directory components
ftp> cd /u2/se2nl
250 UniTree CWD command successful.
ftp> cd v1
250 UniTree CWD command successful.
ftp> dir
200 PORT command successful.
150 Opening ASCII mode data connection for /usr/unitree/unitree.1.7.5/bin/ddir (0 by
drwxr-xr-x 2 se2nl g664 DK common 8192 Jan 2 14:11 ency
drwxr-xr-x 2 se2nl g664 DK common 8192 Jan 2 14:40 ency.0002
drwxr-xr-x 2 se2nl g664 DK common 8192 Jan 2 17:26 ency.0003
drwxr-xr-x 2 se2nl g664 DK common 8192 Jan 2 18:21 ency.0004
drwxr-xr-x 2 se2nl g664 DK common 8192 Jan 2 19:06 ency.0005
drwxr-xr-x 2 se2nl g664 DK common 8192 Jan 2 20:05 ency.0006
drwxr-xr-x 2 se2nl g664 DK common 8192 Jan 2 20:26 ency.0007
drwxr-xr-x 2 se2nl g664 DK common 8192 Jan 2 21:15 ency.0008
drwxr-xr-x 2 se2nl g664 DK common 8192 Jan 2 21:57 ency.0009
drwxr-xr-x 2 se2nl g664 DK common 8192 Jan 2 23:00 ency.0010
drwxr-xr-x 2 se2nl g664 DK common 8192 Jan 3 21:27 ency.0011
drwxr-xr-x 2 se2nl g664 DK common 8192 Jan 3 21:51 ency.0012
drwxr-xr-x 2 se2nl g664 DK common 8192 Jan 4 09:27 ency.0013
drwxr-xr-x 2 se2nl g664 DK common 8192 Jan 4 10:08 ency.0014
drwxr-xr-x 2 se2nl g664 DK common 8192 Jan 4 14:04 ency.0015
drwxr-xr-x 2 se2nl g664 DK common 8192 Jan 4 14:37 ency.0016
drwxr-xr-x 2 se2nl g664 DK common 8192 Jan 4 15:48 ency.0017
drwxr-xr-x 2 se2nl g664 DK common 8192 Jan 4 17:37 ency.0018
drwxr-xr-x 2 se2nl g664 DK common 8192 Jan 5 15:12 ency.0019
drwxr-xr-x 2 se2nl g664 DK common 8192 Jan 5 15:37 ency.0020
drwxr-xr-x 2 se2nl g664 DK common 8192 Jan 10 17:33 ency.0021
drwxr-xr-x 2 se2nl g664 DK common 8192 Jan 10 17:43 ency.0022
drwxr-xr-x 2 se2nl g664 DK common 8192 Jan 10 18:01 ency.0023
drwxr-xr-x 2 se2nl g664 DK common 8192 Jan 10 18:21 ency.0024
drwxr-xr-x 2 se2nl g664 DK common 8192 Jan 12 09:04 ency.0025
drwxr-xr-x 2 se2nl g664 DK common 8192 Jan 12 11:08 ency.0026
drwxr-xr-x 2 se2nl g664 DK common 8192 Jan 12 11:48 ency.0027
drwxr-xr-x 2 se2nl g664 DK common 8192 Jan 12 11:48 encytemp
drwxr-xr-x 2 se2nl g664 DK common 8192 Feb 12 18:19 libtemp
226 Transfer complete.
ftp> dir ency.*
200 PORT command successful.
150 Opening ASCII mode data connection for /usr/unitree/unitree.1.7.5/bin/ddir (0 by
ency.* No such file or directory
226 Transfer complete.
ftp> dir ency.*
200 PORT command successful.
150 Opening ASCII mode data connection for /usr/unitree/unitree.1.7.5/bin/ddir (0 by
ency.0002:
-rw-r--r-- 1 se2nl g664 AR common 15760712 Jan 2 14:30 V1033090.A033
-rw-r--r-- 1 se2nl g664 AR common 15741464 Jan 2 14:32 V1033723.A034
-rw-r--r-- 1 se2nl g664 AR common 15762252 Jan 2 14:33 V1034449.A034
-rw-r--r-- 1 se2nl g664 AR common 15772192 Jan 2 14:34 V1034949.A035
-rw-r--r-- 1 se2nl g664 AR common 15756784 Jan 2 14:35 V1035483.A035
-rw-r--r-- 1 se2nl g664 AR common 15753532 Jan 2 14:36 V1035962.A036
-rw-r--r-- 1 se2nl g664 AR common 15751208 Jan 2 14:38 V1036619.A037
-rw-r--r-- 1 se2nl g664 AR common 15767296 Jan 2 14:39 V1037284.A037
-rw-r--r-- 1 se2nl g664 AR common 14499196 Jan 2 14:40 V1037846.A038

ency.0003:

-rw-r--r--	1	se2nl	g664	AR	common	16498560	Jan	2	17:17	V1038396.A039
-rw-r--r--	1	se2nl	g664	AR	common	15784948	Jan	2	17:18	V1039088.A039
-rw-r--r--	1	se2nl	g664	AR	common	15743120	Jan	2	17:19	V1039445.A039
-rw-r--r--	1	se2nl	g664	AR	common	15741956	Jan	2	17:20	V1039932.A040
-rw-r--r--	1	se2nl	g664	AR	common	15749592	Jan	2	17:21	V1040589.A041
-rw-r--r--	1	se2nl	g664	AR	common	15737680	Jan	2	17:22	V1041210.A041
-rw-r--r--	1	se2nl	g664	AR	common	15741272	Jan	2	17:23	V1041857.A042
-rw-r--r--	1	se2nl	g664	AR	common	15738016	Jan	2	17:24	V1042489.A043
-rw-r--r--	1	se2nl	g664	AR	common	15738404	Jan	2	17:25	V1043023.A043
-rw-r--r--	1	se2nl	g664	AR	common	1349020	Jan	2	17:26	V1043607.A043

ency.0004:

-rw-r--r--	1	se2nl	g664	AR	common	15744548	Jan	2	18:09	V1043653.A044
-rw-r--r--	1	se2nl	g664	AR	common	15740480	Jan	2	18:10	V1044262.A044
-rw-r--r--	1	se2nl	g664	AR	common	15774396	Jan	2	18:12	V1044756.A045
-rw-r--r--	1	se2nl	g664	AR	common	15737504	Jan	2	18:14	V1045162.A045
-rw-r--r--	1	se2nl	g664	AR	common	15752640	Jan	2	18:15	V1045592.A046
-rw-r--r--	1	se2nl	g664	AR	common	15750940	Jan	2	18:16	V1046145.A046
-rw-r--r--	1	se2nl	g664	AR	common	15759304	Jan	2	18:19	V1046547.A046
-rw-r--r--	1	se2nl	g664	AR	common	15781708	Jan	2	18:20	V1046930.A047
-rw-r--r--	1	se2nl	g664	AR	common	12324820	Jan	2	18:21	V1047408.A047

ency.0005:

-rw-r--r--	1	se2nl	g664	AR	common	15753756	Jan	2	18:50	V1047880.A048
-rw-r--r--	1	se2nl	g664	AR	common	15760948	Jan	2	18:51	V1048360.A048
-rw-r--r--	1	se2nl	g664	AR	common	15732796	Jan	2	18:53	V1048860.A049
-rw-r--r--	1	se2nl	g664	AR	common	15733256	Jan	2	18:55	V1049355.A050
-rw-r--r--	1	se2nl	g664	AR	common	15751800	Jan	2	18:57	V1050100.A051
-rw-r--r--	1	se2nl	g664	AR	common	15740208	Jan	2	18:59	V1051166.A052
-rw-r--r--	1	se2nl	g664	AR	common	15745500	Jan	2	19:01	V1052396.A057
-rw-r--r--	1	se2nl	g664	AR	common	15738724	Jan	2	19:03	V1057376.A060
-rw-r--r--	1	se2nl	g664	AR	common	15743504	Jan	2	19:05	V1060061.A063
-rw-r--r--	1	se2nl	g664	AR	common	1453880	Jan	2	19:06	V1063528.A063

ency.0006:

-rw-r--r--	1	se2nl	g664	AR	common	15746012	Jan	2	19:50	V1063899.A067
-rw-r--r--	1	se2nl	g664	AR	common	15736800	Jan	2	19:51	V1067648.A068
-rw-r--r--	1	se2nl	g664	AR	common	15731372	Jan	2	19:53	V1068431.A069
-rw-r--r--	1	se2nl	g664	AR	common	15748520	Jan	2	19:54	V1069055.A069
-rw-r--r--	1	se2nl	g664	AR	common	15747720	Jan	2	19:56	V1069678.A070
-rw-r--r--	1	se2nl	g664	AR	common	15771800	Jan	2	19:58	V1070261.A070
-rw-r--r--	1	se2nl	g664	AR	common	15734136	Jan	2	20:00	V1070747.A071
-rw-r--r--	1	se2nl	g664	AR	common	15747204	Jan	2	20:02	V1071191.A071
-rw-r--r--	1	se2nl	g664	AR	common	15753180	Jan	2	20:04	V1071702.A072
-rw-r--r--	1	se2nl	g664	AR	common	12969540	Jan	2	20:05	V1072234.A072

ency.0007:

-rw-r--r--	1	se2nl	g664	AR	common	15732108	Jan	2	20:11	V1072652.A073
-rw-r--r--	1	se2nl	g664	AR	common	15749576	Jan	2	20:12	V1073229.A073
-rw-r--r--	1	se2nl	g664	AR	common	15762868	Jan	2	20:14	V1073738.A074
-rw-r--r--	1	se2nl	g664	AR	common	15738436	Jan	2	20:16	V1074168.A074
-rw-r--r--	1	se2nl	g664	AR	common	15757468	Jan	2	20:17	V1074626.A075
-rw-r--r--	1	se2nl	g664	AR	common	15744124	Jan	2	20:19	V1075110.A075
-rw-r--r--	1	se2nl	g664	AR	common	15734924	Jan	2	20:21	V1075585.A076
-rw-r--r--	1	se2nl	g664	AR	common	15744216	Jan	2	20:23	V1076005.A076
-rw-r--r--	1	se2nl	g664	AR	common	15755376	Jan	2	20:25	V1076409.A076
-rw-r--r--	1	se2nl	g664	AR	common	8105796	Jan	2	20:26	V1076797.A076

ency.0008:

-rw-r--r--	1	se2nl	g664	AR	common	15756552	Jan	2	20:59	V1076995.A077
-rw-r--r--	1	se2nl	g664	AR	common	15731628	Jan	2	21:01	V1077404.A077
-rw-r--r--	1	se2nl	g664	AR	common	15737604	Jan	2	21:03	V1077810.A078
-rw-r--r--	1	se2nl	g664	AR	common	15736080	Jan	2	21:05	V1078148.A078
-rw-r--r--	1	se2nl	g664	AR	common	15760920	Jan	2	21:08	V1078615.A079
-rw-r--r--	1	se2nl	g664	AR	common	15754592	Jan	2	21:09	V1079004.A079

-rw-r--r--	1	se2nl	g664	AR	common	15743704	Jan	2	21:11	V1079465.A079
-rw-r--r--	1	se2nl	g664	AR	common	15745684	Jan	2	21:12	V1079875.A081
-rw-r--r--	1	se2nl	g664	AR	common	15737180	Jan	2	21:14	V1081088.A082
-rw-r--r--	1	se2nl	g664	AR	common	1342388	Jan	2	21:15	V1082706.A082
ency.0009:										
-rw-r--r--	1	se2nl	g664	AR	common	15743524	Jan	2	21:44	V1082794.A084
-rw-r--r--	1	se2nl	g664	AR	common	15743748	Jan	2	21:46	V1084294.A085
-rw-r--r--	1	se2nl	g664	AR	common	15744652	Jan	2	21:47	V1085682.A087
-rw-r--r--	1	se2nl	g664	AR	common	15743956	Jan	2	21:48	V1087168.A088
-rw-r--r--	1	se2nl	g664	AR	common	15744920	Jan	2	21:50	V1088443.A089
-rw-r--r--	1	se2nl	g664	AR	common	15736028	Jan	2	21:51	V1089683.A091
-rw-r--r--	1	se2nl	g664	AR	common	15745176	Jan	2	21:52	V1091078.A094
-rw-r--r--	1	se2nl	g664	AR	common	15774928	Jan	2	21:54	V1094833.A096
-rw-r--r--	1	se2nl	g664	AR	common	15743548	Jan	2	21:56	V1096372.A097
-rw-r--r--	1	se2nl	g664	AR	common	12081260	Jan	2	21:57	V1097730.A098
ency.0010:										
-rw-r--r--	1	se2nl	g664	AR	common	15739768	Jan	2	22:38	V1098860.A099
-rw-r--r--	1	se2nl	g664	AR	common	15742356	Jan	2	22:40	V1099994.A101
-rw-r--r--	1	se2nl	g664	AR	common	15735664	Jan	2	22:43	V1101301.A102
-rw-r--r--	1	se2nl	g664	AR	common	15761852	Jan	2	22:46	V1102735.A103
-rw-r--r--	1	se2nl	g664	AR	common	15734744	Jan	2	22:50	V1103899.A105
-rw-r--r--	1	se2nl	g664	AR	common	15743428	Jan	2	22:52	V1105170.A106
-rw-r--r--	1	se2nl	g664	AR	common	15740576	Jan	2	22:55	V1106523.A107
-rw-r--r--	1	se2nl	g664	AR	common	15742916	Jan	2	22:57	V1107761.A108
-rw-r--r--	1	se2nl	g664	AR	common	15737456	Jan	2	22:59	V1108985.A110
-rw-r--r--	1	se2nl	g664	AR	common	7697024	Jan	2	23:00	V1110302.A111
ency.0011:										
-rw-r--r--	1	se2nl	g664	AR	common	15732340	Jan	3	21:03	V1111043.A112
-rw-r--r--	1	se2nl	g664	AR	common	15730784	Jan	3	21:06	V1112302.A113
-rw-r--r--	1	se2nl	g664	AR	common	15737496	Jan	3	21:08	V1113922.A115
-rw-r--r--	1	se2nl	g664	AR	common	15761420	Jan	3	21:11	V1115635.A117
-rw-r--r--	1	se2nl	g664	AR	common	15755208	Jan	3	21:13	V1117492.A119
-rw-r--r--	1	se2nl	g664	AR	common	15740232	Jan	3	21:16	V1119918.A121
-rw-r--r--	1	se2nl	g664	AR	common	15740044	Jan	3	21:19	V1121346.A123
-rw-r--r--	1	se2nl	g664	AR	common	15747140	Jan	3	21:21	V1123010.A124
-rw-r--r--	1	se2nl	g664	AR	common	15747292	Jan	3	21:24	V1124810.A126
-rw-r--r--	1	se2nl	g664	AR	common	15737052	Jan	3	21:26	V1126065.A126
-rw-r--r--	1	se2nl	g664	AR	common	5670156	Jan	3	21:27	V1126804.A126
ency.0012:										
-rw-r--r--	1	se2nl	g664	AR	common	15743648	Jan	3	21:32	V1126961.A127
-rw-r--r--	1	se2nl	g664	AR	common	15754416	Jan	3	21:34	V1127383.A127
-rw-r--r--	1	se2nl	g664	AR	common	15749352	Jan	3	21:36	V1127791.A128
-rw-r--r--	1	se2nl	g664	AR	common	15741748	Jan	3	21:38	V1128213.A128
-rw-r--r--	1	se2nl	g664	AR	common	15751200	Jan	3	21:40	V1128694.A129
-rw-r--r--	1	se2nl	g664	AR	common	15735800	Jan	3	21:42	V1129183.A129
-rw-r--r--	1	se2nl	g664	AR	common	15757104	Jan	3	21:45	V1129598.A129
-rw-r--r--	1	se2nl	g664	AR	common	15749956	Jan	3	21:47	V1129936.A130
-rw-r--r--	1	se2nl	g664	AR	common	14220724	Jan	3	21:51	V1130429.A130
ency.0013:										
-rw-r--r--	1	se2nl	g664	AR	common	15738656	Jan	4	09:11	V1130947.A131
-rw-r--r--	1	se2nl	g664	AR	common	15755856	Jan	4	09:13	V1131488.A132
-rw-r--r--	1	se2nl	g664	AR	common	15735396	Jan	4	09:14	V1132009.A132
-rw-r--r--	1	se2nl	g664	AR	common	15732064	Jan	4	09:15	V1132535.A133
-rw-r--r--	1	se2nl	g664	AR	common	15747296	Jan	4	09:17	V1133055.A133
-rw-r--r--	1	se2nl	g664	AR	common	15744844	Jan	4	09:19	V1133578.A134
-rw-r--r--	1	se2nl	g664	AR	common	15750620	Jan	4	09:20	V1134071.A134
-rw-r--r--	1	se2nl	g664	AR	common	15739240	Jan	4	09:23	V1134548.A134
-rw-r--r--	1	se2nl	g664	AR	common	15737928	Jan	4	09:25	V1134958.A135
-rw-r--r--	1	se2nl	g664	AR	common	6652096	Jan	4	09:27	V1135445.A135
ency.0014:										

-rw-r--r--	1	se2nl	g664	AR	common	15756168	Jan	4	09:53	V1135625.A136
-rw-r--r--	1	se2nl	g664	AR	common	15757692	Jan	4	09:55	V1136055.A136
-rw-r--r--	1	se2nl	g664	AR	common	15759252	Jan	4	09:57	V1136479.A136
-rw-r--r--	1	se2nl	g664	AR	common	15756884	Jan	4	09:59	V1136820.A137
-rw-r--r--	1	se2nl	g664	AR	common	15747712	Jan	4	10:04	V1137198.A137
-rw-r--r--	1	se2nl	g664	AR	common	15772832	Jan	4	10:05	V1137669.A138
-rw-r--r--	1	se2nl	g664	AR	common	15746112	Jan	4	10:06	V1138029.A138
-rw-r--r--	1	se2nl	g664	AR	common	15747860	Jan	4	10:07	V1138401.A138
-rw-r--r--	1	se2nl	g664	AR	common	12750752	Jan	4	10:08	V1138908.A140
ency.0015:										
-rw-r--r--	1	se2nl	g664	AR	common	15735960	Jan	4	13:51	V1140657.A142
-rw-r--r--	1	se2nl	g664	AR	common	15743476	Jan	4	13:53	V1142591.A144
-rw-r--r--	1	se2nl	g664	AR	common	15735240	Jan	4	13:55	V1144229.A146
-rw-r--r--	1	se2nl	g664	AR	common	15760044	Jan	4	13:56	V1146123.A148
-rw-r--r--	1	se2nl	g664	AR	common	15736792	Jan	4	13:58	V1148129.A150
-rw-r--r--	1	se2nl	g664	AR	common	15734064	Jan	4	13:59	V1150399.A152
-rw-r--r--	1	se2nl	g664	AR	common	15737988	Jan	4	14:00	V1152358.A153
-rw-r--r--	1	se2nl	g664	AR	common	15730768	Jan	4	14:02	V1153488.A157
-rw-r--r--	1	se2nl	g664	AR	common	15732380	Jan	4	14:03	V1157060.A162
-rw-r--r--	1	se2nl	g664	AR	common	11781064	Jan	4	14:04	V1162295.A166
ency.0016:										
-rw-r--r--	1	se2nl	g664	AR	common	15738196	Jan	4	14:23	V1166014.A168
-rw-r--r--	1	se2nl	g664	AR	common	15731232	Jan	4	14:25	V1168864.A171
-rw-r--r--	1	se2nl	g664	AR	common	15731640	Jan	4	14:26	V1171551.A175
-rw-r--r--	1	se2nl	g664	AR	common	15737520	Jan	4	14:28	V1175403.A178
-rw-r--r--	1	se2nl	g664	AR	common	15733352	Jan	4	14:29	V1178766.A182
-rw-r--r--	1	se2nl	g664	AR	common	15751536	Jan	4	14:31	V1182832.A184
-rw-r--r--	1	se2nl	g664	AR	common	15737700	Jan	4	14:32	V1184579.A188
-rw-r--r--	1	se2nl	g664	AR	common	15736936	Jan	4	14:34	V1188078.A191
-rw-r--r--	1	se2nl	g664	AR	common	15772596	Jan	4	14:36	V1191971.A194
-rw-r--r--	1	se2nl	g664	AR	common	15732400	Jan	4	14:37	V1194143.A196
-rw-r--r--	1	se2nl	g664	AR	common	1742424	Jan	4	14:37	V1196429.A196
ency.0017:										
-rw-r--r--	1	se2nl	g664	AR	common	15760544	Jan	4	15:31	V1196595.A199
-rw-r--r--	1	se2nl	g664	AR	common	15734084	Jan	4	15:33	V1199205.A201
-rw-r--r--	1	se2nl	g664	AR	common	15736632	Jan	4	15:34	V1201813.A205
-rw-r--r--	1	se2nl	g664	AR	common	15738764	Jan	4	15:36	V1205187.A209
-rw-r--r--	1	se2nl	g664	AR	common	15732092	Jan	4	15:37	V1209260.A212
-rw-r--r--	1	se2nl	g664	AR	common	15732596	Jan	4	15:39	V1212390.A215
-rw-r--r--	1	se2nl	g664	AR	common	15737520	Jan	4	15:44	V1215530.A217
-rw-r--r--	1	se2nl	g664	AR	common	15741424	Jan	4	15:46	V1217819.A221
-rw-r--r--	1	se2nl	g664	AR	common	11755408	Jan	4	15:48	V1221474.A223
ency.0018:										
-rw-r--r--	1	se2nl	g664	AR	common	15730704	Jan	4	17:14	V1223335.A226
-rw-r--r--	1	se2nl	g664	AR	common	15764876	Jan	4	17:17	V1226301.A229
-rw-r--r--	1	se2nl	g664	AR	common	15732924	Jan	4	17:19	V1229812.A233
-rw-r--r--	1	se2nl	g664	AR	common	15757176	Jan	4	17:21	V1233460.A235
-rw-r--r--	1	se2nl	g664	AR	common	15734100	Jan	4	17:25	V1235770.A239
-rw-r--r--	1	se2nl	g664	AR	common	15748736	Jan	4	17:28	V1239419.A243
-rw-r--r--	1	se2nl	g664	AR	common	15738288	Jan	4	17:30	V1243116.A246
-rw-r--r--	1	se2nl	g664	AR	common	15730952	Jan	4	17:33	V1246156.A250
-rw-r--r--	1	se2nl	g664	AR	common	15738868	Jan	4	17:35	V1250274.A253
-rw-r--r--	1	se2nl	g664	AR	common	12365540	Jan	4	17:36	V1253115.A255
ency.0019:										
-rw-r--r--	1	se2nl	g664	AR	common	15739044	Jan	5	14:58	V1255183.A258
-rw-r--r--	1	se2nl	g664	AR	common	15732132	Jan	5	15:00	V1258738.A261
-rw-r--r--	1	se2nl	g664	AR	common	15736356	Jan	5	15:01	V1261410.A265
-rw-r--r--	1	se2nl	g664	AR	common	15733296	Jan	5	15:03	V1265514.A271
-rw-r--r--	1	se2nl	g664	AR	common	15735436	Jan	5	15:04	V1271114.A278
-rw-r--r--	1	se2nl	g664	AR	common	15734316	Jan	5	15:06	V1278713.A283
-rw-r--r--	1	se2nl	g664	AR	common	15733960	Jan	5	15:07	V1283999.A290

-rw-r--r--	1	se2nl	g664	AR	common	15732304	Jan	5	15:08	V1290161.A296
-rw-r--r--	1	se2nl	g664	AR	common	15734172	Jan	5	15:10	V1296203.A301
-rw-r--r--	1	se2nl	g664	AR	common	13106652	Jan	5	15:12	V1301685.A305
ency.0020:										
-rw-r--r--	1	se2nl	g664	AR	common	15731024	Jan	5	15:28	V1305462.A312
-rw-r--r--	1	se2nl	g664	AR	common	15736048	Jan	5	15:29	V1312168.A321
-rw-r--r--	1	se2nl	g664	AR	common	15730688	Jan	5	15:31	V1321212.A325
-rw-r--r--	1	se2nl	g664	AR	common	15731344	Jan	5	15:32	V1325688.A329
-rw-r--r--	1	se2nl	g664	AR	common	15732340	Jan	5	15:34	V1329119.A332
-rw-r--r--	1	se2nl	g664	AR	common	15731172	Jan	5	15:35	V1332158.A335
-rw-r--r--	1	se2nl	g664	AR	common	15731204	Jan	5	15:36	V1335554.A338
-rw-r--r--	1	se2nl	g664	AR	common	7384324	Jan	5	15:37	V1338682.A340
ency.0021:										
-rw-r--r--	1	se2nl	g664	AR	common	15733880	Jan	10	17:20	V1340195.A344
-rw-r--r--	1	se2nl	g664	AR	common	15738752	Jan	10	17:21	V1344511.A348
-rw-r--r--	1	se2nl	g664	AR	common	15736892	Jan	10	17:23	V1348057.A352
-rw-r--r--	1	se2nl	g664	AR	common	15739640	Jan	10	17:24	V1352085.A355
-rw-r--r--	1	se2nl	g664	AR	common	15733260	Jan	10	17:25	V1355897.A359
-rw-r--r--	1	se2nl	g664	AR	common	15737784	Jan	10	17:27	V1359583.A362
-rw-r--r--	1	se2nl	g664	AR	common	15735052	Jan	10	17:28	V1362937.A365
-rw-r--r--	1	se2nl	g664	AR	common	15734680	Jan	10	17:30	V1365599.A369
-rw-r--r--	1	se2nl	g664	AR	common	15734628	Jan	10	17:31	V1369323.A372
-rw-r--r--	1	se2nl	g664	AR	common	11983696	Jan	10	17:33	V1372621.A374
ency.0022:										
-rw-r--r--	1	se2nl	g664	AR	common	15737860	Jan	10	17:38	V1374325.A377
-rw-r--r--	1	se2nl	g664	AR	common	15737536	Jan	10	17:39	V1377023.A380
-rw-r--r--	1	se2nl	g664	AR	common	15752688	Jan	10	17:40	V1380091.A383
-rw-r--r--	1	se2nl	g664	AR	common	15738404	Jan	10	17:41	V1383328.A386
-rw-r--r--	1	se2nl	g664	AR	common	15760968	Jan	10	17:43	V1386362.A388
-rw-r--r--	1	se2nl	g664	AR	common	1293664	Jan	10	17:43	V1388907.A389
ency.0023:										
-rw-r--r--	1	se2nl	g664	AR	common	15737600	Jan	10	17:49	V1389078.A391
-rw-r--r--	1	se2nl	g664	AR	common	15730724	Jan	10	17:51	V1391311.A393
-rw-r--r--	1	se2nl	g664	AR	common	15732316	Jan	10	17:52	V1393606.A396
-rw-r--r--	1	se2nl	g664	AR	common	15733224	Jan	10	17:53	V1396119.A398
-rw-r--r--	1	se2nl	g664	AR	common	15734404	Jan	10	17:54	V1398742.A401
-rw-r--r--	1	se2nl	g664	AR	common	15740200	Jan	10	17:56	V1401235.A404
-rw-r--r--	1	se2nl	g664	AR	common	15764952	Jan	10	17:57	V1404519.A406
-rw-r--r--	1	se2nl	g664	AR	common	15735944	Jan	10	17:58	V1406850.A409
-rw-r--r--	1	se2nl	g664	AR	common	15734064	Jan	10	18:00	V1409115.A411
-rw-r--r--	1	se2nl	g664	AR	common	12002176	Jan	10	18:01	V1411226.A413
ency.0024:										
-rw-r--r--	1	se2nl	g664	AR	common	15740024	Jan	10	18:07	V1413324.A417
-rw-r--r--	1	se2nl	g664	AR	common	15738756	Jan	10	18:09	V1417002.A419
-rw-r--r--	1	se2nl	g664	AR	common	15736412	Jan	10	18:10	V1419916.A423
-rw-r--r--	1	se2nl	g664	AR	common	15731876	Jan	10	18:12	V1423073.A425
-rw-r--r--	1	se2nl	g664	AR	common	15736524	Jan	10	18:14	V1425564.A427
-rw-r--r--	1	se2nl	g664	AR	common	15731808	Jan	10	18:16	V1427792.A429
-rw-r--r--	1	se2nl	g664	AR	common	15735060	Jan	10	18:17	V1429869.A432
-rw-r--r--	1	se2nl	g664	AR	common	11391964	Jan	10	18:21	V1432915.A435
ency.0025:										
-rw-r--r--	1	se2nl	g664	AR	common	15731152	Jan	12	08:51	V1435127.A438
-rw-r--r--	1	se2nl	g664	AR	common	15733224	Jan	12	08:53	V1438013.A440
-rw-r--r--	1	se2nl	g664	AR	common	15733432	Jan	12	08:54	V1440725.A445
-rw-r--r--	1	se2nl	g664	AR	common	15738308	Jan	12	08:55	V1445767.A449
-rw-r--r--	1	se2nl	g664	AR	common	15732636	Jan	12	08:57	V1449326.A454
-rw-r--r--	1	se2nl	g664	AR	common	15737976	Jan	12	08:58	V1454566.A459
-rw-r--r--	1	se2nl	g664	AR	common	15735220	Jan	12	09:00	V1459324.A462
-rw-r--r--	1	se2nl	g664	AR	common	15735720	Jan	12	09:01	V1462933.A466
-rw-r--r--	1	se2nl	g664	AR	common	15736304	Jan	12	09:02	V1466435.A469

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-rw-r--r-- 1 se2nl g664 AR common 14445468 Jan 12 09:04 V1469584.A472

ency.0026:
-rw-r--r-- 1 se2nl g664 AR common 15736772 Jan 12 10:52 V1472383.A474
-rw-r--r-- 1 se2nl g664 AR common 15737048 Jan 12 10:53 V1474508.A476
-rw-r--r-- 1 se2nl g664 AR common 15736404 Jan 12 10:55 V1476509.A481
-rw-r--r-- 1 se2nl g664 AR common 15736908 Jan 12 10:57 V1481456.A490
-rw-r--r-- 1 se2nl g664 AR common 15733092 Jan 12 10:59 V1490501.A495
-rw-r--r-- 1 se2nl g664 AR common 15738876 Jan 12 11:01 V1495692.A498
-rw-r--r-- 1 se2nl g664 AR common 15732216 Jan 12 11:03 V1498791.A501
-rw-r--r-- 1 se2nl g664 AR common 15735780 Jan 12 11:05 V1501551.A505
-rw-r--r-- 1 se2nl g664 AR common 15731588 Jan 12 11:06 V1505646.A509
-rw-r--r-- 1 se2nl g664 AR common 15116204 Jan 12 11:08 V1509127.A512

ency.0027:
-rw-r--r-- 1 se2nl g664 AR common 15731836 Jan 12 11:30 V1512344.A515
-rw-r--r-- 1 se2nl g664 AR common 15740132 Jan 12 11:32 V1515470.A518
-rw-r--r-- 1 se2nl g664 AR common 15734840 Jan 12 11:35 V1518857.A523
-rw-r--r-- 1 se2nl g664 AR common 15734132 Jan 12 11:37 V1523516.A529
-rw-r--r-- 1 se2nl g664 AR common 15737620 Jan 12 11:39 V1529638.A534
-rw-r--r-- 1 se2nl g664 AR common 15734816 Jan 12 11:41 V1534458.A538
-rw-r--r-- 1 se2nl g664 AR common 15732132 Jan 12 11:43 V1538601.A541
-rw-r--r-- 1 se2nl g664 AR common 15733648 Jan 12 11:45 V1541543.A544
-rw-r--r-- 1 se2nl g664 DK common 15732580 Jan 12 11:47 V1544577.A547
-rw-r--r-- 1 se2nl g664 AR common 15099448 Jan 12 11:48 V1547884.A551

226 Transfer complete.

ftp> dir ency
200 PORT command successful.
150 Opening ASCII mode data connection for /usr/unitree/unitree.1.7.5/bin/ddir (0 by
-rw-r--r-- 1 se2nl g664 DK common 15760680 Jan 2 14:02 V1023937.A024
-rw-r--r-- 1 se2nl g664 DK common 15735556 Jan 2 14:03 V1024295.A024
-rw-r--r-- 1 se2nl g664 AR common 15737824 Jan 2 14:04 V1024626.A027
-rw-r--r-- 1 se2nl g664 AR common 15739964 Jan 2 14:06 V1027777.A030
-rw-r--r-- 1 se2nl g664 AR common 15734060 Jan 2 14:07 V1030364.A030
-rw-r--r-- 1 se2nl g664 AR common 15771852 Jan 2 14:08 V1030931.A031
-rw-r--r-- 1 se2nl g664 AR common 15770304 Jan 2 14:09 V1031423.A031
-rw-r--r-- 1 se2nl g664 AR common 15747588 Jan 2 14:10 V1031840.A032
-rw-r--r-- 1 se2nl g664 AR common 15734604 Jan 2 14:11 V1032355.A033
-rw-r--r-- 1 se2nl g664 AR common 1493520 Jan 2 14:11 V1033027.A033

226 Transfer complete.

ftp> cd ..
250 UniTree CWD command successful.
ftp> cd v2
250 UniTree CWD command successful.
ftp> dir
200 PORT command successful.
150 Opening ASCII mode data connection for /usr/unitree/unitree.1.7.5/bin/ddir (0 by
drwxr-xr-x 2 se2nl g664 DK common 8192 Jan 2 13:58 ency
drwxr-xr-x 2 se2nl g664 DK common 8192 Jan 2 14:28 ency.0002
drwxr-xr-x 2 se2nl g664 DK common 8192 Jan 2 17:40 ency.0003
drwxr-xr-x 2 se2nl g664 DK common 8192 Jan 2 18:06 ency.0004
drwxr-xr-x 2 se2nl g664 DK common 8192 Jan 2 18:40 ency.0005
drwxr-xr-x 2 se2nl g664 DK common 8192 Jan 2 19:46 ency.0006
drwxr-xr-x 2 se2nl g664 DK common 8192 Jan 2 20:49 ency.0007
drwxr-xr-x 2 se2nl g664 DK common 8192 Jan 2 21:41 ency.0008
drwxr-xr-x 2 se2nl g664 DK common 8192 Jan 2 22:33 ency.0009
drwxr-xr-x 2 se2nl g664 DK common 8192 Jan 2 23:26 ency.0010
drwxr-xr-x 2 se2nl g664 DK common 8192 Jan 4 10:40 ency.0011
drwxr-xr-x 2 se2nl g664 DK common 8192 Jan 4 11:11 ency.0012
drwxr-xr-x 2 se2nl g664 DK common 8192 Jan 4 11:42 ency.0013
drwxr-xr-x 2 se2nl g664 DK common 8192 Jan 4 13:12 ency.0014
drwxr-xr-x 2 se2nl g664 DK common 8192 Jan 5 17:52 ency.0015
drwxr-xr-x 2 se2nl g664 DK common 8192 Jan 5 18:32 ency.0016
drwxr-xr-x 2 se2nl g664 DK common 8192 Jan 6 11:54 ency.0017
drwxr-xr-x 2 se2nl g664 DK common 8192 Jan 6 12:24 ency.0018
drwxr-xr-x 2 se2nl g664 DK common 8192 Jan 6 12:57 ency.0019

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drwxr-xr-x	2	se2nl	g664	DK	common	8192	Jan	6	13:19	ency.0020
drwxr-xr-x	2	se2nl	g664	DK	common	8192	Jan	6	13:48	ency.0021
drwxr-xr-x	2	se2nl	g664	DK	common	8192	Jan	6	14:25	ency.0022
drwxr-xr-x	2	se2nl	g664	DK	common	8192	Jan	6	14:51	ency.0023
drwxr-xr-x	2	se2nl	g664	DK	common	8192	Jan	6	15:27	ency.0024
drwxr-xr-x	2	se2nl	g664	DK	common	8192	Jan	6	16:20	ency.0025
drwxr-xr-x	2	se2nl	g664	DK	common	8192	Jan	6	19:21	ency.0026
drwxr-xr-x	2	se2nl	g664	DK	common	8192	Jan	10	09:15	ency.0027
drwxr-xr-x	2	se2nl	g664	DK	common	8192	Jan	10	09:37	ency.0028
drwxr-xr-x	2	se2nl	g664	DK	common	8192	Jan	10	10:20	ency.0029
drwxr-xr-x	2	se2nl	g664	DK	common	8192	Jan	10	10:44	ency.0030
drwxr-xr-x	2	se2nl	g664	DK	common	8192	Jan	10	11:08	ency.0031
drwxr-xr-x	2	se2nl	g664	DK	common	8192	Jan	10	12:20	ency.0032
drwxr-xr-x	2	se2nl	g664	DK	common	8192	Jan	10	12:40	ency.0033
drwxr-xr-x	2	se2nl	g664	DK	common	8192	Jan	10	13:10	ency.0034
drwxr-xr-x	2	se2nl	g664	DK	common	8192	Jan	10	14:13	ency.0035
drwxr-xr-x	2	se2nl	g664	DK	common	8192	Jan	12	12:42	ency.0036
drwxr-xr-x	2	se2nl	g664	DK	common	8192	Jan	10	10:28	ency.0037
drwxr-xr-x	2	se2nl	g664	DK	common	8192	Jan	10	10:27	ency.32
drwxr-xr-x	2	se2nl	g664	DK	common	8192	Jan	12	12:42	encytemp

226 Transfer complete.

ftp> dir ency.*

200 PORT command successful.

150 Opening ASCII mode data connection for /usr/unitree/unitree.1.7.5/bin/ddir (0 by ency.0002:

-rw-r--r--	1	se2nl	g664	AR	common	20273136	Jan	2	14:19	V2033677.A034
-rw-r--r--	1	se2nl	g664	AR	common	15744964	Jan	2	14:20	V2034631.A035
-rw-r--r--	1	se2nl	g664	AR	common	15743088	Jan	2	14:21	V2035181.A035
-rw-r--r--	1	se2nl	g664	AR	common	15731708	Jan	2	14:22	V2035717.A036
-rw-r--r--	1	se2nl	g664	AR	common	15737212	Jan	2	14:23	V2036225.A036
-rw-r--r--	1	se2nl	g664	AR	common	15738388	Jan	2	14:25	V2036990.A037
-rw-r--r--	1	se2nl	g664	AR	common	15750424	Jan	2	14:26	V2037684.A038
-rw-r--r--	1	se2nl	g664	AR	common	15758236	Jan	2	14:27	V2038390.A039
-rw-r--r--	1	se2nl	g664	AR	common	15757688	Jan	2	14:28	V2039100.A039
-rw-r--r--	1	se2nl	g664	AR	common	967576	Jan	2	14:28	V2039675.A039

ency.0003:

-rw-r--r--	1	se2nl	g664	AR	common	15742972	Jan	2	17:30	V2039717.A040
-rw-r--r--	1	se2nl	g664	AR	common	15763780	Jan	2	17:31	V2040298.A041
-rw-r--r--	1	se2nl	g664	AR	common	15739492	Jan	2	17:33	V2041006.A041
-rw-r--r--	1	se2nl	g664	AR	common	15752868	Jan	2	17:34	V2041548.A042
-rw-r--r--	1	se2nl	g664	AR	common	15732256	Jan	2	17:35	V2042198.A042
-rw-r--r--	1	se2nl	g664	AR	common	15740292	Jan	2	17:36	V2042790.A043
-rw-r--r--	1	se2nl	g664	AR	common	15740412	Jan	2	17:38	V2043483.A044
-rw-r--r--	1	se2nl	g664	AR	common	15768356	Jan	2	17:39	V2044129.A044
-rw-r--r--	1	se2nl	g664	AR	common	15731760	Jan	2	17:40	V2044539.A044
-rw-r--r--	1	se2nl	g664	AR	common	488432	Jan	2	17:40	V2044942.A044

ency.0004:

-rw-r--r--	1	se2nl	g664	AR	common	15754264	Jan	2	17:56	V2044951.A045
-rw-r--r--	1	se2nl	g664	AR	common	15753988	Jan	2	17:58	V2045469.A045
-rw-r--r--	1	se2nl	g664	AR	common	15756636	Jan	2	17:59	V2045865.A046
-rw-r--r--	1	se2nl	g664	AR	common	15759360	Jan	2	18:00	V2046250.A046
-rw-r--r--	1	se2nl	g664	AR	common	15757156	Jan	2	18:01	V2046610.A046
-rw-r--r--	1	se2nl	g664	AR	common	15747172	Jan	2	18:02	V2046925.A047
-rw-r--r--	1	se2nl	g664	AR	common	15775568	Jan	2	18:03	V2047291.A047
-rw-r--r--	1	se2nl	g664	AR	common	15752692	Jan	2	18:05	V2047832.A048
-rw-r--r--	1	se2nl	g664	AR	common	12618928	Jan	2	18:06	V2048588.A049

ency.0005:

-rw-r--r--	1	se2nl	g664	AR	common	15769852	Jan	2	18:25	V2049117.A049
-rw-r--r--	1	se2nl	g664	AR	common	15753516	Jan	2	18:27	V2049864.A050
-rw-r--r--	1	se2nl	g664	AR	common	15732616	Jan	2	18:29	V2050440.A051
-rw-r--r--	1	se2nl	g664	AR	common	15736692	Jan	2	18:30	V2051117.A052
-rw-r--r--	1	se2nl	g664	AR	common	15736436	Jan	2	18:32	V2052812.A058
-rw-r--r--	1	se2nl	g664	AR	common	15740872	Jan	2	18:34	V2058816.A061

-rw-r--r--	1	se2nl	g664	AR	common	15761500	Jan	2	18:35	V2061815.A065
-rw-r--r--	1	se2nl	g664	AR	common	15743596	Jan	2	18:37	V2065539.A067
-rw-r--r--	1	se2nl	g664	AR	common	15731108	Jan	2	18:39	V2067658.A069
-rw-r--r--	1	se2nl	g664	AR	common	6123944	Jan	2	18:40	V2069454.A070
ency.0006:										
-rw-r--r--	1	se2nl	g664	AR	common	15743676	Jan	2	19:33	V2070122.A072
-rw-r--r--	1	se2nl	g664	AR	common	15731584	Jan	2	19:34	V2072007.A073
-rw-r--r--	1	se2nl	g664	AR	common	15734008	Jan	2	19:35	V2073799.A075
-rw-r--r--	1	se2nl	g664	AR	common	15739588	Jan	2	19:37	V2075440.A077
-rw-r--r--	1	se2nl	g664	AR	common	15755384	Jan	2	19:39	V2077014.A078
-rw-r--r--	1	se2nl	g664	AR	common	15753108	Jan	2	19:40	V2078366.A080
-rw-r--r--	1	se2nl	g664	AR	common	15736372	Jan	2	19:41	V2080050.A080
-rw-r--r--	1	se2nl	g664	AR	common	15746828	Jan	2	19:43	V2080463.A081
-rw-r--r--	1	se2nl	g664	AR	common	15741344	Jan	2	19:45	V2081134.A081
-rw-r--r--	1	se2nl	g664	AR	common	13478716	Jan	2	19:46	V2081821.A082
ency.0007:										
-rw-r--r--	1	se2nl	g664	AR	common	15749384	Jan	2	20:36	V2082489.A083
-rw-r--r--	1	se2nl	g664	AR	common	15752776	Jan	2	20:37	V2083189.A083
-rw-r--r--	1	se2nl	g664	AR	common	15745028	Jan	2	20:38	V2083877.A084
-rw-r--r--	1	se2nl	g664	AR	common	15745800	Jan	2	20:40	V2084355.A084
-rw-r--r--	1	se2nl	g664	AR	common	15765016	Jan	2	20:42	V2084746.A085
-rw-r--r--	1	se2nl	g664	AR	common	15752396	Jan	2	20:44	V2085433.A085
-rw-r--r--	1	se2nl	g664	AR	common	15779844	Jan	2	20:46	V2085756.A086
-rw-r--r--	1	se2nl	g664	AR	common	15781484	Jan	2	20:47	V2086166.A086
-rw-r--r--	1	se2nl	g664	AR	common	14535224	Jan	2	20:49	V2086477.A086
ency.0008:										
-rw-r--r--	1	se2nl	g664	AR	common	15732016	Jan	2	21:19	V2086779.A087
-rw-r--r--	1	se2nl	g664	AR	common	15744960	Jan	2	21:21	V2087235.A087
-rw-r--r--	1	se2nl	g664	AR	common	15751160	Jan	2	21:23	V2087688.A088
-rw-r--r--	1	se2nl	g664	AR	common	15742240	Jan	2	21:26	V2088076.A088
-rw-r--r--	1	se2nl	g664	AR	common	15736944	Jan	2	21:28	V2088450.A088
-rw-r--r--	1	se2nl	g664	AR	common	15770300	Jan	2	21:31	V2088806.A089
-rw-r--r--	1	se2nl	g664	AR	common	15755856	Jan	2	21:34	V2089173.A089
-rw-r--r--	1	se2nl	g664	AR	common	15774432	Jan	2	21:36	V2089594.A089
-rw-r--r--	1	se2nl	g664	AR	common	15766768	Jan	2	21:39	V2090000.A090
-rw-r--r--	1	se2nl	g664	AR	common	10959440	Jan	2	21:41	V2090489.A090
ency.0009:										
-rw-r--r--	1	se2nl	g664	AR	common	15752696	Jan	2	22:10	V2090813.A091
-rw-r--r--	1	se2nl	g664	AR	common	15734416	Jan	2	22:12	V2091370.A093
-rw-r--r--	1	se2nl	g664	AR	common	15743856	Jan	2	22:15	V2093868.A095
-rw-r--r--	1	se2nl	g664	AR	common	15746116	Jan	2	22:17	V2095440.A096
-rw-r--r--	1	se2nl	g664	AR	common	15746736	Jan	2	22:19	V2096620.A097
-rw-r--r--	1	se2nl	g664	AR	common	15759252	Jan	2	22:23	V2097973.A099
-rw-r--r--	1	se2nl	g664	AR	common	15769848	Jan	2	22:25	V2099243.A100
-rw-r--r--	1	se2nl	g664	AR	common	15731436	Jan	2	22:28	V2100266.A101
-rw-r--r--	1	se2nl	g664	AR	common	15740212	Jan	2	22:31	V2101340.A102
-rw-r--r--	1	se2nl	g664	AR	common	14934952	Jan	2	22:33	V2102619.A104
ency.0010:										
-rw-r--r--	1	se2nl	g664	AR	common	15741920	Jan	2	23:05	V2104086.A105
-rw-r--r--	1	se2nl	g664	AR	common	15744848	Jan	2	23:07	V2105795.A107
-rw-r--r--	1	se2nl	g664	AR	common	15735472	Jan	2	23:10	V2107042.A108
-rw-r--r--	1	se2nl	g664	AR	common	15743040	Jan	2	23:13	V2108085.A109
-rw-r--r--	1	se2nl	g664	AR	common	15734896	Jan	2	23:16	V2109535.A111
-rw-r--r--	1	se2nl	g664	AR	common	15742096	Jan	2	23:19	V2111694.A114
-rw-r--r--	1	se2nl	g664	AR	common	15732540	Jan	2	23:20	V2114114.A116
-rw-r--r--	1	se2nl	g664	AR	common	15734924	Jan	2	23:22	V2116007.A117
-rw-r--r--	1	se2nl	g664	AR	common	15739824	Jan	2	23:24	V2117617.A119
-rw-r--r--	1	se2nl	g664	AR	common	7800604	Jan	2	23:26	V2119134.A119
ency.0011:										
-rw-r--r--	1	se2nl	g664	AR	common	15733944	Jan	4	10:21	V2119554.A121

-rw-r--r--	1	se2nl	g664	AR	common	15737592	Jan	4	10:22	V2121282.A122
-rw-r--r--	1	se2nl	g664	AR	common	15733592	Jan	4	10:24	V2122486.A124
-rw-r--r--	1	se2nl	g664	AR	common	15751456	Jan	4	10:32	V2124389.A126
-rw-r--r--	1	se2nl	g664	AR	common	15777716	Jan	4	10:34	V2126138.A129
-rw-r--r--	1	se2nl	g664	AR	common	15734324	Jan	4	10:35	V2129283.A133
-rw-r--r--	1	se2nl	g664	AR	common	15731244	Jan	4	10:37	V2133424.A137
-rw-r--r--	1	se2nl	g664	AR	common	13767984	Jan	4	10:40	V2137108.A138
ency.0012:										
-rw-r--r--	1	se2nl	g664	AR	common	15738600	Jan	4	10:51	V2138717.A140
-rw-r--r--	1	se2nl	g664	AR	common	15734088	Jan	4	10:53	V2140617.A142
-rw-r--r--	1	se2nl	g664	AR	common	15734552	Jan	4	10:54	V2142543.A144
-rw-r--r--	1	se2nl	g664	AR	common	15745204	Jan	4	10:56	V2144538.A145
-rw-r--r--	1	se2nl	g664	AR	common	15731932	Jan	4	10:57	V2145706.A147
-rw-r--r--	1	se2nl	g664	AR	common	15742064	Jan	4	10:59	V2147431.A148
-rw-r--r--	1	se2nl	g664	AR	common	15735928	Jan	4	11:00	V2148383.A149
-rw-r--r--	1	se2nl	g664	AR	common	15736540	Jan	4	11:02	V2149378.A150
-rw-r--r--	1	se2nl	g664	AR	common	15743632	Jan	4	11:10	V2150477.A151
-rw-r--r--	1	se2nl	g664	AR	common	7350216	Jan	4	11:11	V2151183.A151
ency.0013:										
-rw-r--r--	1	se2nl	g664	AR	common	15766948	Jan	4	11:20	V2151624.A152
-rw-r--r--	1	se2nl	g664	AR	common	15753572	Jan	4	11:23	V2152022.A152
-rw-r--r--	1	se2nl	g664	AR	common	15736344	Jan	4	11:24	V2152467.A153
-rw-r--r--	1	se2nl	g664	AR	common	15746528	Jan	4	11:27	V2153562.A154
-rw-r--r--	1	se2nl	g664	AR	common	15740196	Jan	4	11:29	V2154444.A154
-rw-r--r--	1	se2nl	g664	AR	common	15745088	Jan	4	11:35	V2154985.A155
-rw-r--r--	1	se2nl	g664	AR	common	15738624	Jan	4	11:37	V2155314.A155
-rw-r--r--	1	se2nl	g664	AR	common	15758644	Jan	4	11:39	V2155748.A156
-rw-r--r--	1	se2nl	g664	AR	common	14612644	Jan	4	11:42	V2156236.A156
ency.0014:										
-rw-r--r--	1	se2nl	g664	AR	common	15750336	Jan	4	11:59	V2156702.A157
-rw-r--r--	1	se2nl	g664	AR	common	15734492	Jan	4	13:02	V2157222.A157
-rw-r--r--	1	se2nl	g664	AR	common	15749008	Jan	4	13:04	V2157851.A158
-rw-r--r--	1	se2nl	g664	AR	common	15739732	Jan	4	13:05	V2158388.A158
-rw-r--r--	1	se2nl	g664	AR	common	15749108	Jan	4	13:06	V2158907.A159
-rw-r--r--	1	se2nl	g664	AR	common	15738840	Jan	4	13:08	V2159438.A159
-rw-r--r--	1	se2nl	g664	AR	common	15737400	Jan	4	13:09	V2159959.A160
-rw-r--r--	1	se2nl	g664	AR	common	15737064	Jan	4	13:10	V2160492.A160
-rw-r--r--	1	se2nl	g664	AR	common	15766436	Jan	4	13:12	V2160999.A161
-rw-r--r--	1	se2nl	g664	AR	common	9189968	Jan	4	13:12	V2161448.A161
ency.0015:										
-rw-r--r--	1	se2nl	g664	AR	common	15737336	Jan	5	17:38	V2161650.A162
-rw-r--r--	1	se2nl	g664	AR	common	15738736	Jan	5	17:40	V2162156.A162
-rw-r--r--	1	se2nl	g664	AR	common	15738468	Jan	5	17:42	V2162636.A163
-rw-r--r--	1	se2nl	g664	AR	common	15762984	Jan	5	17:44	V2163078.A163
-rw-r--r--	1	se2nl	g664	AR	common	15737880	Jan	5	17:46	V2163517.A164
-rw-r--r--	1	se2nl	g664	AR	common	15759776	Jan	5	17:47	V2164027.A164
-rw-r--r--	1	se2nl	g664	AR	common	15760628	Jan	5	17:49	V2164681.A165
-rw-r--r--	1	se2nl	g664	AR	common	15765888	Jan	5	17:50	V2165220.A165
-rw-r--r--	1	se2nl	g664	AR	common	15771884	Jan	5	17:51	V2165762.A166
-rw-r--r--	1	se2nl	g664	AR	common	4781720	Jan	5	17:52	V2166179.A166
ency.0016:										
-rw-r--r--	1	se2nl	g664	AR	common	15738440	Jan	5	18:19	V2166297.A166
-rw-r--r--	1	se2nl	g664	AR	common	15744444	Jan	5	18:21	V2166841.A167
-rw-r--r--	1	se2nl	g664	AR	common	15743556	Jan	5	18:23	V2167650.A168
-rw-r--r--	1	se2nl	g664	AR	common	15735616	Jan	5	18:26	V2168212.A168
-rw-r--r--	1	se2nl	g664	AR	common	15734924	Jan	5	18:28	V2168700.A169
-rw-r--r--	1	se2nl	g664	AR	common	15741916	Jan	5	18:30	V2169241.A169
-rw-r--r--	1	se2nl	g664	AR	common	15735864	Jan	5	18:32	V2169730.A170
-rw-r--r--	1	se2nl	g664	AR	common	6345136	Jan	5	18:32	V2170374.A170

ency.0017:

-rw-r--r--	1	se2nl	g664	AR	common	15731084	Jan	6	11:37	V2170609.A172
-rw-r--r--	1	se2nl	g664	AR	common	15737936	Jan	6	11:39	V2172287.A175
-rw-r--r--	1	se2nl	g664	AR	common	15734500	Jan	6	11:41	V2175422.A178
-rw-r--r--	1	se2nl	g664	AR	common	15757128	Jan	6	11:43	V2178733.A180
-rw-r--r--	1	se2nl	g664	AR	common	15739220	Jan	6	11:45	V2180572.A183
-rw-r--r--	1	se2nl	g664	AR	common	15763732	Jan	6	11:47	V2183127.A185
-rw-r--r--	1	se2nl	g664	AR	common	15730700	Jan	6	11:49	V2185435.A187
-rw-r--r--	1	se2nl	g664	AR	common	15732252	Jan	6	11:51	V2187431.A190
-rw-r--r--	1	se2nl	g664	AR	common	15740268	Jan	6	11:53	V2190304.A190
-rw-r--r--	1	se2nl	g664	AR	common	5864476	Jan	6	11:54	V2190980.A191
ency.0018:										
-rw-r--r--	1	se2nl	g664	AR	common	15742444	Jan	6	12:02	V2191160.A191
-rw-r--r--	1	se2nl	g664	AR	common	15737700	Jan	6	12:03	V2191727.A193
-rw-r--r--	1	se2nl	g664	AR	common	15738244	Jan	6	12:04	V2193030.A194
-rw-r--r--	1	se2nl	g664	AR	common	15735348	Jan	6	12:06	V2194942.A195
-rw-r--r--	1	se2nl	g664	AR	common	15739132	Jan	6	12:09	V2195651.A198
-rw-r--r--	1	se2nl	g664	AR	common	15732280	Jan	6	12:11	V2198525.A201
-rw-r--r--	1	se2nl	g664	AR	common	15736248	Jan	6	12:16	V2201968.A205
-rw-r--r--	1	se2nl	g664	AR	common	15768052	Jan	6	12:20	V2205147.A208
-rw-r--r--	1	se2nl	g664	AR	common	15740500	Jan	6	12:23	V2208350.A210
-rw-r--r--	1	se2nl	g664	AR	common	5505320	Jan	6	12:24	V2210958.A211
ency.0019:										
-rw-r--r--	1	se2nl	g664	AR	common	15739472	Jan	6	12:36	V2211960.A212
-rw-r--r--	1	se2nl	g664	AR	common	15732576	Jan	6	12:39	V2212850.A215
-rw-r--r--	1	se2nl	g664	AR	common	15734832	Jan	6	12:40	V2215821.A219
-rw-r--r--	1	se2nl	g664	AR	common	15754784	Jan	6	12:42	V2219603.A222
-rw-r--r--	1	se2nl	g664	AR	common	15748724	Jan	6	12:44	V2222983.A225
-rw-r--r--	1	se2nl	g664	AR	common	15740860	Jan	6	12:47	V2225755.A228
-rw-r--r--	1	se2nl	g664	AR	common	15741476	Jan	6	12:50	V2228857.A232
-rw-r--r--	1	se2nl	g664	AR	common	15737884	Jan	6	12:53	V2232200.A235
-rw-r--r--	1	se2nl	g664	AR	common	15734724	Jan	6	12:55	V2235994.A238
-rw-r--r--	1	se2nl	g664	AR	common	9416576	Jan	6	12:57	V2238573.A240
ency.0020:										
-rw-r--r--	1	se2nl	g664	AR	common	15735032	Jan	6	13:07	V2240004.A243
-rw-r--r--	1	se2nl	g664	AR	common	15730760	Jan	6	13:08	V2243852.A247
-rw-r--r--	1	se2nl	g664	AR	common	15753192	Jan	6	13:10	V2247458.A250
-rw-r--r--	1	se2nl	g664	AR	common	15735900	Jan	6	13:11	V2250935.A254
-rw-r--r--	1	se2nl	g664	AR	common	15736732	Jan	6	13:12	V2254162.A257
-rw-r--r--	1	se2nl	g664	AR	common	15734376	Jan	6	13:14	V2257103.A259
-rw-r--r--	1	se2nl	g664	AR	common	15734008	Jan	6	13:15	V2259526.A262
-rw-r--r--	1	se2nl	g664	AR	common	15740236	Jan	6	13:16	V2262305.A265
-rw-r--r--	1	se2nl	g664	AR	common	15754088	Jan	6	13:18	V2265387.A269
-rw-r--r--	1	se2nl	g664	AR	common	8792388	Jan	6	13:19	V2269929.A271
ency.0021:										
-rw-r--r--	1	se2nl	g664	AR	common	15736952	Jan	6	13:35	V2271960.A276
-rw-r--r--	1	se2nl	g664	AR	common	15739908	Jan	6	13:37	V2276422.A280
-rw-r--r--	1	se2nl	g664	AR	common	15733108	Jan	6	13:40	V2280980.A285
-rw-r--r--	1	se2nl	g664	AR	common	15746500	Jan	6	13:41	V2285757.A289
-rw-r--r--	1	se2nl	g664	AR	common	15756716	Jan	6	13:43	V2289496.A291
-rw-r--r--	1	se2nl	g664	AR	common	15731740	Jan	6	13:45	V2291967.A293
-rw-r--r--	1	se2nl	g664	AR	common	15750996	Jan	6	13:46	V2293794.A295
-rw-r--r--	1	se2nl	g664	AR	common	14534916	Jan	6	13:48	V2295505.A296
ency.0022:										
-rw-r--r--	1	se2nl	g664	AR	common	15744128	Jan	6	14:06	V2296988.A298
-rw-r--r--	1	se2nl	g664	AR	common	15739368	Jan	6	14:11	V2298017.A298
-rw-r--r--	1	se2nl	g664	AR	common	15759288	Jan	6	14:15	V2298939.A300
-rw-r--r--	1	se2nl	g664	AR	common	15744064	Jan	6	14:17	V2300097.A301
-rw-r--r--	1	se2nl	g664	AR	common	15738824	Jan	6	14:20	V2301094.A302
-rw-r--r--	1	se2nl	g664	AR	common	15760104	Jan	6	14:21	V2302631.A303
-rw-r--r--	1	se2nl	g664	AR	common	15731012	Jan	6	14:22	V2303691.A305
-rw-r--r--	1	se2nl	g664	AR	common	15759712	Jan	6	14:24	V2305013.A306

-rw-r--r--	1	se2nl	g664	AR	common	15738528	Jan	6	14:25	V2306246.A307
-rw-r--r--	1	se2nl	g664	AR	common	3352200	Jan	6	14:25	V2307445.A307
ency.0023:										
-rw-r--r--	1	se2nl	g664	AR	common	15762088	Jan	6	14:36	V2307622.A308
-rw-r--r--	1	se2nl	g664	AR	common	15738596	Jan	6	14:38	V2308664.A309
-rw-r--r--	1	se2nl	g664	AR	common	15734092	Jan	6	14:39	V2309552.A310
-rw-r--r--	1	se2nl	g664	AR	common	15745488	Jan	6	14:41	V2310254.A310
-rw-r--r--	1	se2nl	g664	AR	common	15737596	Jan	6	14:43	V2310839.A311
-rw-r--r--	1	se2nl	g664	AR	common	15751824	Jan	6	14:45	V2311430.A311
-rw-r--r--	1	se2nl	g664	AR	common	15750484	Jan	6	14:47	V2311989.A312
-rw-r--r--	1	se2nl	g664	AR	common	15752960	Jan	6	14:49	V2312568.A313
-rw-r--r--	1	se2nl	g664	AR	common	7535048	Jan	6	14:51	V2313170.A313
ency.0024:										
-rw-r--r--	1	se2nl	g664	AR	common	15754604	Jan	6	14:58	V2313910.A314
-rw-r--r--	1	se2nl	g664	AR	common	15763856	Jan	6	15:01	V2314486.A315
-rw-r--r--	1	se2nl	g664	AR	common	15754592	Jan	6	15:04	V2315085.A315
-rw-r--r--	1	se2nl	g664	AR	common	15759948	Jan	6	15:07	V2315710.A316
-rw-r--r--	1	se2nl	g664	AR	common	15749208	Jan	6	15:10	V2316265.A316
-rw-r--r--	1	se2nl	g664	AR	common	15765088	Jan	6	15:13	V2316788.A317
-rw-r--r--	1	se2nl	g664	AR	common	15739968	Jan	6	15:18	V2317325.A317
-rw-r--r--	1	se2nl	g664	AR	common	15735008	Jan	6	15:22	V2317731.A318
-rw-r--r--	1	se2nl	g664	AR	common	15762388	Jan	6	15:25	V2318169.A318
-rw-r--r--	1	se2nl	g664	AR	common	4290712	Jan	6	15:27	V2318707.A319
ency.0025:										
-rw-r--r--	1	se2nl	g664	AR	common	15761352	Jan	6	15:55	V2319029.A319
-rw-r--r--	1	se2nl	g664	AR	common	15752320	Jan	6	15:59	V2319663.A320
-rw-r--r--	1	se2nl	g664	AR	common	15738624	Jan	6	16:01	V2320281.A320
-rw-r--r--	1	se2nl	g664	AR	common	15738312	Jan	6	16:04	V2320859.A324
-rw-r--r--	1	se2nl	g664	AR	common	15734188	Jan	6	16:07	V2324647.A327
-rw-r--r--	1	se2nl	g664	AR	common	15758608	Jan	6	16:10	V2327735.A330
-rw-r--r--	1	se2nl	g664	AR	common	15732196	Jan	6	16:12	V2330979.A333
-rw-r--r--	1	se2nl	g664	AR	common	15735548	Jan	6	16:15	V2333774.A336
-rw-r--r--	1	se2nl	g664	AR	common	15739592	Jan	6	16:18	V2336680.A340
-rw-r--r--	1	se2nl	g664	AR	common	9529600	Jan	6	16:20	V2340048.A341
ency.0026:										
-rw-r--r--	1	se2nl	g664	AR	common	15752696	Jan	6	19:17	V2341787.A345
-rw-r--r--	1	se2nl	g664	AR	common	15741064	Jan	6	19:19	V2345385.A348
-rw-r--r--	1	se2nl	g664	AR	common	15733340	Jan	6	19:21	V2348552.A353
ency.0027:										
-rw-r--r--	1	se2nl	g664	AR	common	15763516	Jan	10	09:05	V2362455.A364
-rw-r--r--	1	se2nl	g664	AR	common	15756592	Jan	10	09:06	V2364758.A367
-rw-r--r--	1	se2nl	g664	AR	common	15732236	Jan	10	09:08	V2367500.A370
-rw-r--r--	1	se2nl	g664	AR	common	15748472	Jan	10	09:10	V2370099.A372
-rw-r--r--	1	se2nl	g664	AR	common	15737236	Jan	10	09:11	V2372668.A374
-rw-r--r--	1	se2nl	g664	AR	common	15733184	Jan	10	09:13	V2374714.A376
-rw-r--r--	1	se2nl	g664	AR	common	15738016	Jan	10	09:14	V2376570.A378
-rw-r--r--	1	se2nl	g664	AR	common	1705536	Jan	10	09:15	V2378882.A379
ency.0028:										
-rw-r--r--	1	se2nl	g664	AR	common	15758992	Jan	10	09:28	V2379089.A381
-rw-r--r--	1	se2nl	g664	AR	common	15735320	Jan	10	09:30	V2381692.A385
-rw-r--r--	1	se2nl	g664	AR	common	15731316	Jan	10	09:31	V2385580.A387
-rw-r--r--	1	se2nl	g664	AR	common	15737240	Jan	10	09:32	V2387960.A390
-rw-r--r--	1	se2nl	g664	AR	common	15737276	Jan	10	09:34	V2390168.A392
-rw-r--r--	1	se2nl	g664	AR	common	15735064	Jan	10	09:35	V2392523.A395
-rw-r--r--	1	se2nl	g664	AR	common	15758732	Jan	10	09:37	V2395017.A398
-rw-r--r--	1	se2nl	g664	AR	common	2306572	Jan	10	09:37	V2398086.A398
ency.0029:										
-rw-r--r--	1	se2nl	g664	AR	common	15735288	Jan	10	10:04	V2398455.A400
-rw-r--r--	1	se2nl	g664	AR	common	15756620	Jan	10	10:06	V2400774.A402

-rw-r--r--	1	se2nl	g664	AR	common	15745948	Jan	10	10:09	V2402420.A403
-rw-r--r--	1	se2nl	g664	AR	common	15740124	Jan	10	10:13	V2403181.A404
-rw-r--r--	1	se2nl	g664	AR	common	15761064	Jan	10	10:14	V2404283.A405
-rw-r--r--	1	se2nl	g664	AR	common	15731188	Jan	10	10:18	V2405075.A406
-rw-r--r--	1	se2nl	g664	AR	common	15738216	Jan	10	10:20	V2406406.A408
-rw-r--r--	1	se2nl	g664	AR	common	2227180	Jan	10	10:20	V2408675.A408
ency.0030:										
-rw-r--r--	1	se2nl	g664	AR	common	15738528	Jan	10	10:32	V2408938.A411
-rw-r--r--	1	se2nl	g664	AR	common	15734204	Jan	10	10:34	V2411107.A413
-rw-r--r--	1	se2nl	g664	AR	common	15736592	Jan	10	10:36	V2413518.A415
-rw-r--r--	1	se2nl	g664	AR	common	15736804	Jan	10	10:37	V2415572.A417
-rw-r--r--	1	se2nl	g664	AR	common	15749328	Jan	10	10:39	V2417671.A421
-rw-r--r--	1	se2nl	g664	AR	common	15755324	Jan	10	10:41	V2421320.A423
-rw-r--r--	1	se2nl	g664	AR	common	15734024	Jan	10	10:43	V2423955.A426
-rw-r--r--	1	se2nl	g664	AR	common	8081416	Jan	10	10:44	V2426146.A427
ency.0031:										
-rw-r--r--	1	se2nl	g664	AR	common	15739224	Jan	10	10:57	V2427540.A430
-rw-r--r--	1	se2nl	g664	AR	common	15747900	Jan	10	10:58	V2430020.A431
-rw-r--r--	1	se2nl	g664	AR	common	15737552	Jan	10	10:59	V2431331.A432
-rw-r--r--	1	se2nl	g664	AR	common	15755508	Jan	10	11:00	V2432251.A433
-rw-r--r--	1	se2nl	g664	AR	common	15745860	Jan	10	11:02	V2433321.A434
-rw-r--r--	1	se2nl	g664	AR	common	15756132	Jan	10	11:03	V2434585.A435
-rw-r--r--	1	se2nl	g664	AR	common	15733560	Jan	10	11:05	V2435771.A436
-rw-r--r--	1	se2nl	g664	AR	common	15757804	Jan	10	11:06	V2436281.A436
-rw-r--r--	1	se2nl	g664	AR	common	15736544	Jan	10	11:08	V2436792.A437
-rw-r--r--	1	se2nl	g664	AR	common	1926900	Jan	10	11:08	V2437311.A437
ency.0032:										
-rw-r--r--	1	se2nl	g664	AR	common	15755216	Jan	10	12:04	V2437368.A437
-rw-r--r--	1	se2nl	g664	AR	common	15756336	Jan	10	12:05	V2437831.A438
-rw-r--r--	1	se2nl	g664	AR	common	15738484	Jan	10	12:06	V2438310.A438
-rw-r--r--	1	se2nl	g664	AR	common	15743544	Jan	10	12:08	V2438797.A439
-rw-r--r--	1	se2nl	g664	AR	common	15749068	Jan	10	12:10	V2439284.A440
-rw-r--r--	1	se2nl	g664	AR	common	15743980	Jan	10	12:11	V2440090.A440
-rw-r--r--	1	se2nl	g664	AR	common	15755852	Jan	10	12:17	V2440599.A441
-rw-r--r--	1	se2nl	g664	AR	common	15745288	Jan	10	12:18	V2441092.A441
-rw-r--r--	1	se2nl	g664	AR	common	15758920	Jan	10	12:20	V2441662.A442
-rw-r--r--	1	se2nl	g664	AR	common	1122676	Jan	10	12:20	V2442252.A442
ency.0033:										
-rw-r--r--	1	se2nl	g664	AR	common	15756060	Jan	10	12:28	V2442287.A442
-rw-r--r--	1	se2nl	g664	AR	common	15743252	Jan	10	12:29	V2442792.A443
-rw-r--r--	1	se2nl	g664	AR	common	15741776	Jan	10	12:31	V2443230.A443
-rw-r--r--	1	se2nl	g664	AR	common	15737004	Jan	10	12:32	V2443618.A444
-rw-r--r--	1	se2nl	g664	AR	common	15739196	Jan	10	12:33	V2444057.A444
-rw-r--r--	1	se2nl	g664	AR	common	15746776	Jan	10	12:35	V2444562.A445
-rw-r--r--	1	se2nl	g664	AR	common	15732588	Jan	10	12:36	V2445097.A445
-rw-r--r--	1	se2nl	g664	AR	common	15745124	Jan	10	12:37	V2445661.A446
-rw-r--r--	1	se2nl	g664	AR	common	15731420	Jan	10	12:39	V2446181.A446
-rw-r--r--	1	se2nl	g664	AR	common	12944548	Jan	10	12:40	V2446697.A447
ency.0034:										
-rw-r--r--	1	se2nl	g664	AR	common	15738276	Jan	10	12:58	V2447851.A450
-rw-r--r--	1	se2nl	g664	AR	common	15738760	Jan	10	12:59	V2450367.A453
-rw-r--r--	1	se2nl	g664	AR	common	15733032	Jan	10	13:01	V2453688.A455
-rw-r--r--	1	se2nl	g664	AR	common	15737332	Jan	10	13:02	V2457353.A460
-rw-r--r--	1	se2nl	g664	AR	common	15732920	Jan	10	13:03	V2460252.A463
-rw-r--r--	1	se2nl	g664	AR	common	15732084	Jan	10	13:05	V2463182.A466
-rw-r--r--	1	se2nl	g664	AR	common	15731420	Jan	10	13:06	V2466891.A470
-rw-r--r--	1	se2nl	g664	AR	common	15737632	Jan	10	13:08	V2470585.A473
-rw-r--r--	1	se2nl	g664	AR	common	15739252	Jan	10	13:09	V2473770.A476
-rw-r--r--	1	se2nl	g664	AR	common	15731692	Jan	10	13:10	V2476633.A479

ency.0035:

```
-rw-r--r-- 1 se2nl g664 AR common 15733936 Jan 10 13:59 V2479421.A484
-rw-r--r-- 1 se2nl g664 AR common 15735216 Jan 10 14:00 V2484856.A491
-rw-r--r-- 1 se2nl g664 AR common 15734248 Jan 10 14:02 V2491459.A495
-rw-r--r-- 1 se2nl g664 AR common 15739892 Jan 10 14:04 V2499088.A502
-rw-r--r-- 1 se2nl g664 AR common 15735732 Jan 10 14:06 V2502074.A505
-rw-r--r-- 1 se2nl g664 AR common 15734944 Jan 10 14:08 V2505187.A507
-rw-r--r-- 1 se2nl g664 AR common 15734204 Jan 10 14:09 V2507960.A510
-rw-r--r-- 1 se2nl g664 AR common 15736240 Jan 10 14:11 V2510753.A513
-rw-r--r-- 1 se2nl g664 AR common 15736536 Jan 10 14:12 V2513285.A516
-rw-r--r-- 1 se2nl g664 AR common 11212192 Jan 10 14:13 V2516014.A518
```

ency.0036:

```
-rw-r--r-- 1 se2nl g664 AR common 15730692 Jan 12 12:32 V2518283.A521
-rw-r--r-- 1 se2nl g664 AR common 15737212 Jan 12 12:34 V2521880.A527
-rw-r--r-- 1 se2nl g664 AR common 15737752 Jan 12 12:35 V2527507.A534
-rw-r--r-- 1 se2nl g664 AR common 15731896 Jan 12 12:36 V2534687.A540
-rw-r--r-- 1 se2nl g664 AR common 15733728 Jan 12 12:37 V2540303.A543
-rw-r--r-- 1 se2nl g664 AR common 15734800 Jan 12 12:39 V2543858.A547
-rw-r--r-- 1 se2nl g664 AR common 15732792 Jan 12 12:40 V2547993.A553
-rw-r--r-- 1 se2nl g664 AR common 14962920 Jan 12 12:42 V2553567.A559
```

ency.0037:

ency.32:

226 Transfer complete.

```
ftp> dir ency
```

200 PORT command successful.

```
150 Opening ASCII mode data connection for /usr/unitree/unitree.1.7.5/bin/ddir (0 by
-rw-r--r-- 1 se2nl g664 AR common 15738060 Jan 2 12:37 V2022590.A024
-rw-r--r-- 1 se2nl g664 AR common 15735984 Jan 2 12:38 V2024794.A028
-rw-r--r-- 1 se2nl g664 AR common 15745456 Jan 2 12:39 V2028776.A029
-rw-r--r-- 1 se2nl g664 AR common 15750240 Jan 2 12:40 V2029932.A030
-rw-r--r-- 1 se2nl g664 AR common 15749360 Jan 2 12:41 V2030527.A031
-rw-r--r-- 1 se2nl g664 AR common 15755996 Jan 2 12:42 V2031215.A031
-rw-r--r-- 1 se2nl g664 AR common 15740632 Jan 2 12:43 V2031621.A032
-rw-r--r-- 1 se2nl g664 AR common 15756700 Jan 2 12:44 V2032163.A032
-rw-r--r-- 1 se2nl g664 AR common 15748840 Jan 2 12:45 V2032842.A033
-rw-r--r-- 1 se2nl g664 AR common 3188352 Jan 2 13:58 V2033543.A033
```

226 Transfer complete.

```
ftp> cd ..
```

250 UniTree CWD command successful.

```
ftp> dir
```

200 PORT command successful.

```
150 Opening ASCII mode data connection for /usr/unitree/unitree.1.7.5/bin/ddir (0 by
drwxr-xr-x 2 se2nl g664 DK common 8192 Oct 1 1992 .trash
drwxr-xr-x 31 se2nl g664 DK common 8192 Jan 2 11:58 v1
drwxr-xr-x 41 se2nl g664 DK common 8192 Jan 2 11:58 v2
drwxr-xr-x 3 se2nl g664 DK common 8192 Dec 29 11:54 voyager
```

226 Transfer complete.

```
ftp> cd voyager
```

250 UniTree CWD command successful.

```
ftp> dir
```

200 PORT command successful.

```
150 Opening ASCII mode data connection for /usr/unitree/unitree.1.7.5/bin/ddir (0 by
drwxr-xr-x 2 se2nl g664 DK common 8192 Dec 29 11:55 encytemp
```

226 Transfer complete.

```
ftp> cd encytemp
```

250 UniTree CWD command successful.

```
ftp> dir
```

200 PORT command successful.

```
150 Opening ASCII mode data connection for /usr/unitree/unitree.1.7.5/bin/ddir (0 by
226 Transfer complete.
```

```
ftp> cd ..
```

250 UniTree CWD command successful.

```
ftp> cd ..
```

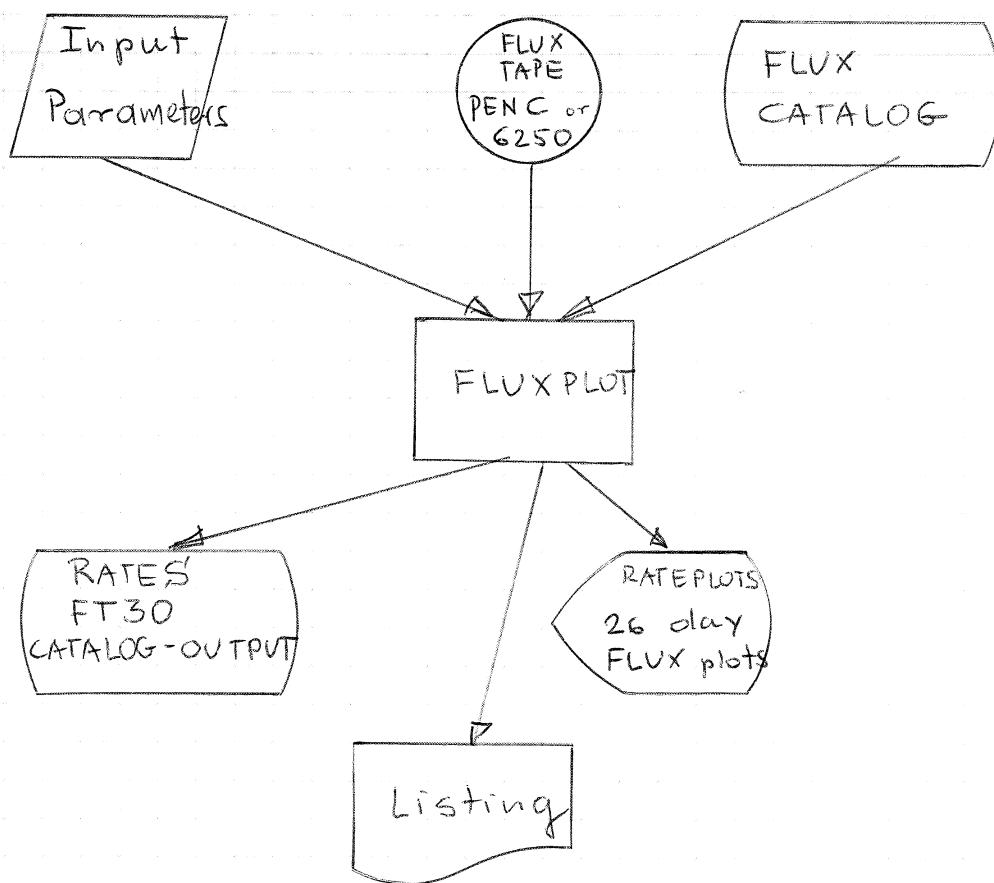
250 UniTree CWD command successful.

ftp> pwd
257 "/u2/se2nl" is current directory.
ftp>

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Pioneer Data Processing System

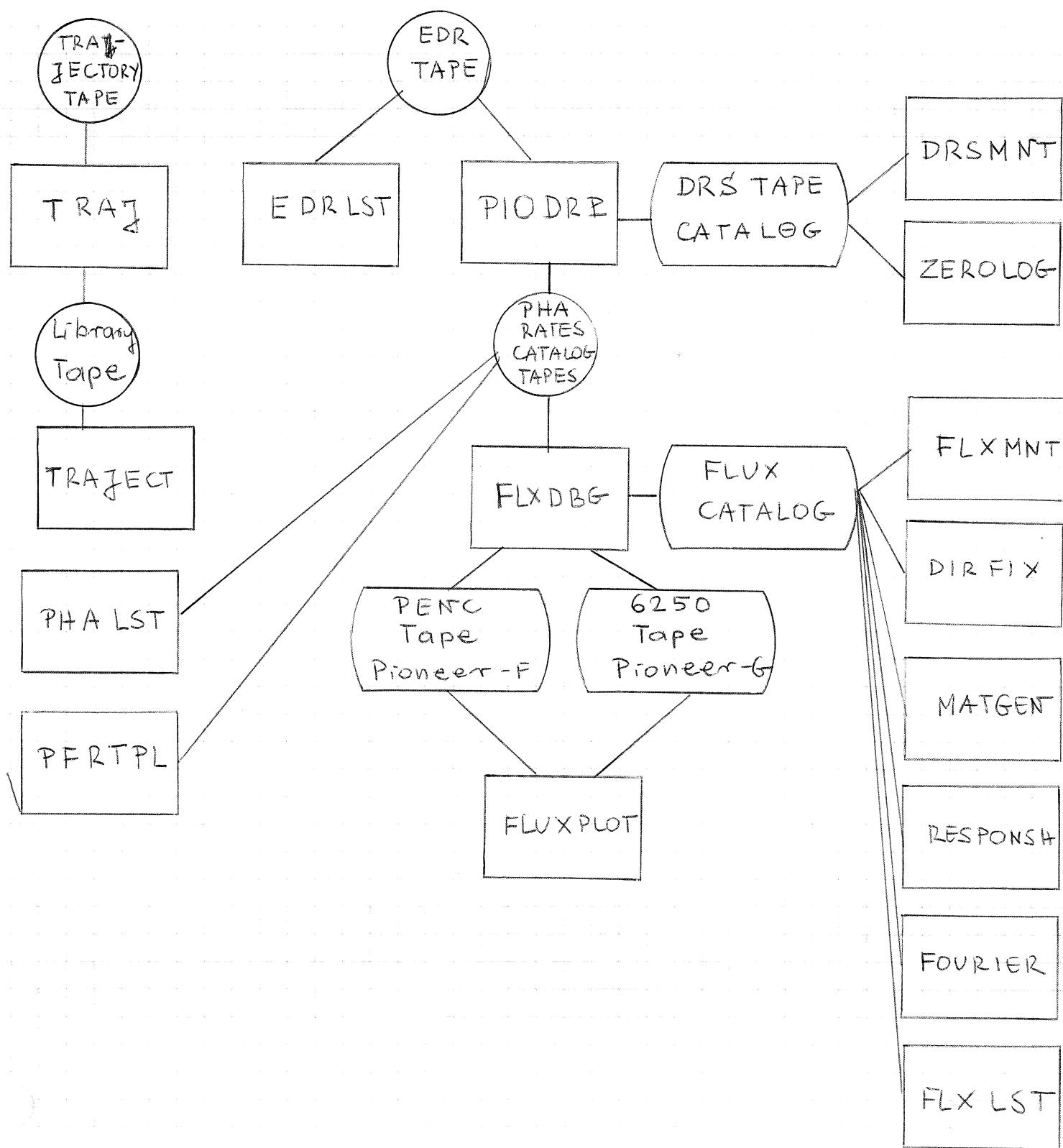
II. FLUX PLOT



revise (see vov/see)
model

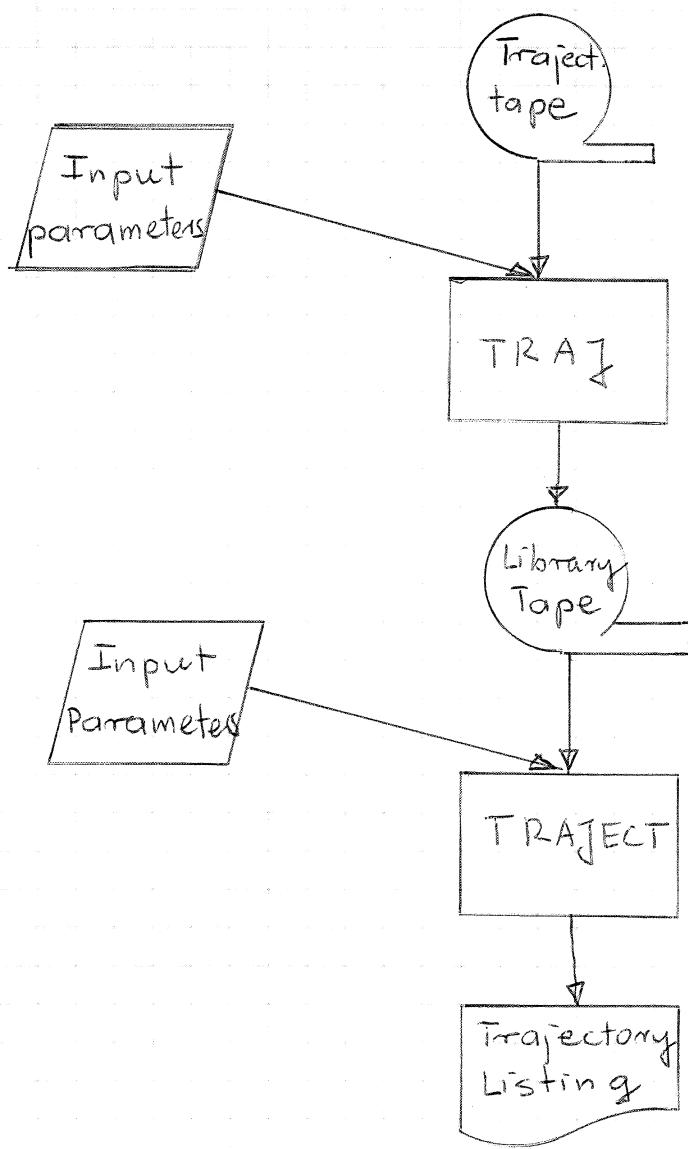
Pioneer Data Processing System

Simplified flow chart for programs



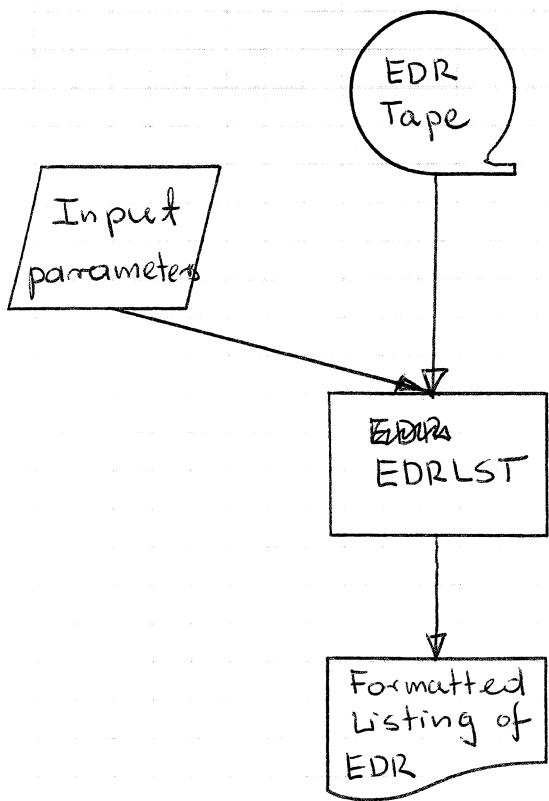
Pioneer Data Processing System

1. Trajectory programs



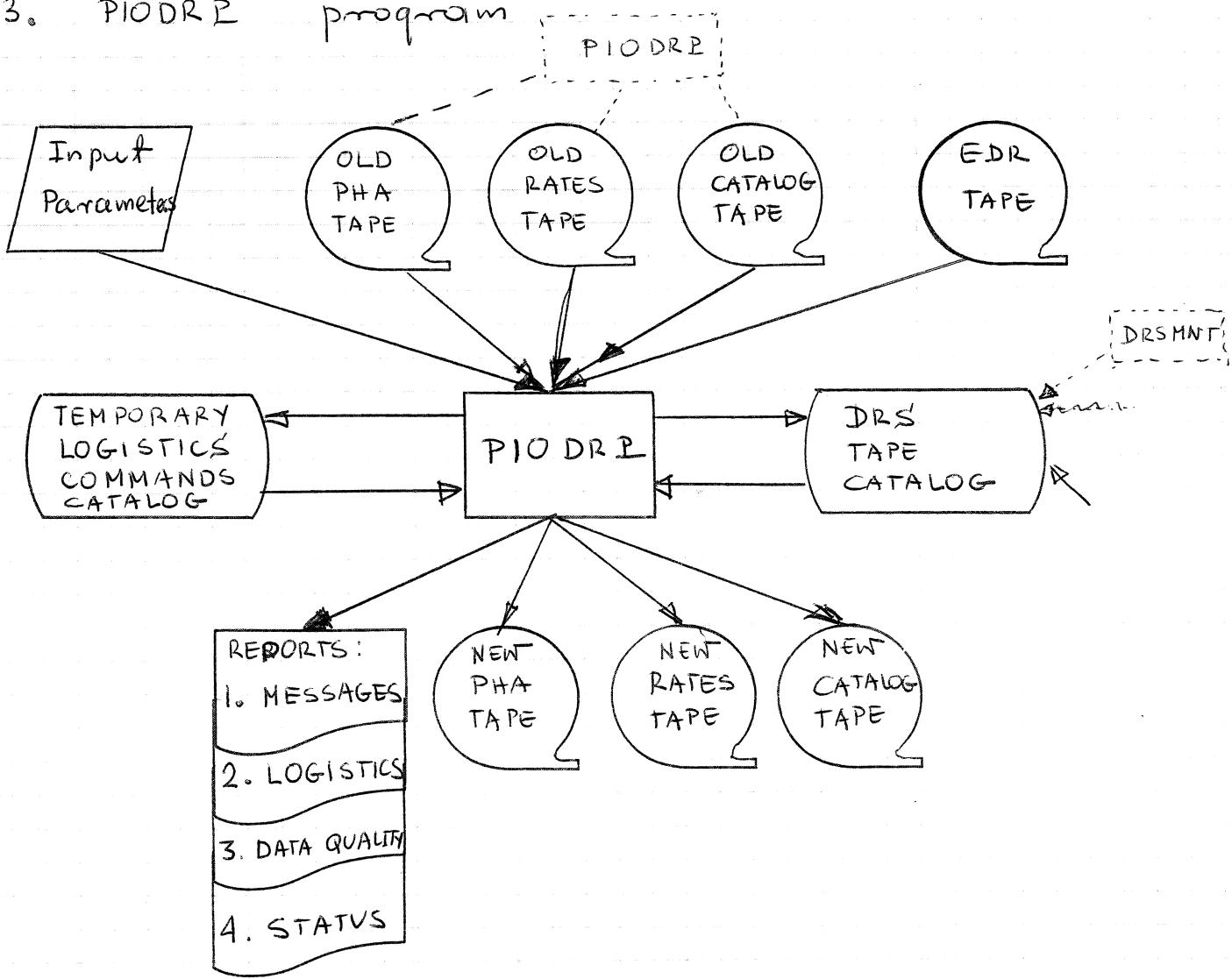
Pioneer Data Processing System

2. Program for listing of EDR tapes



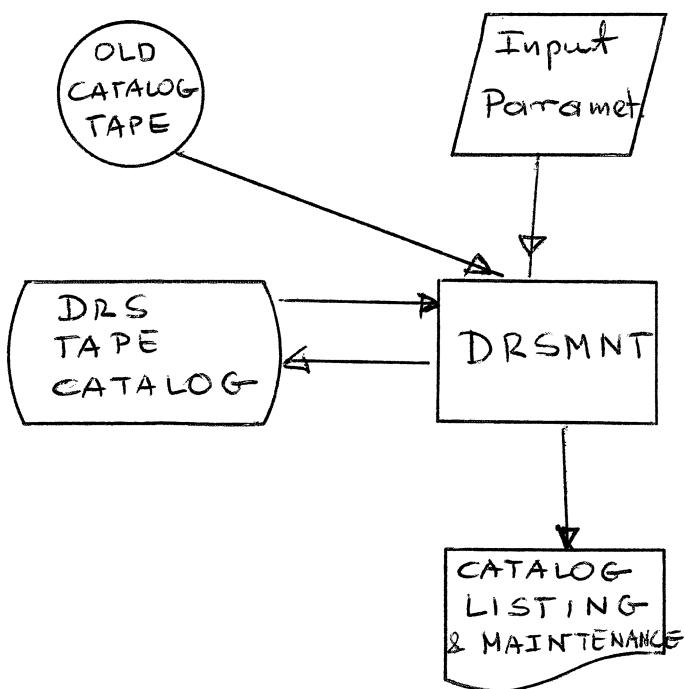
Pioneer Data Processing System

3. PIODRP program



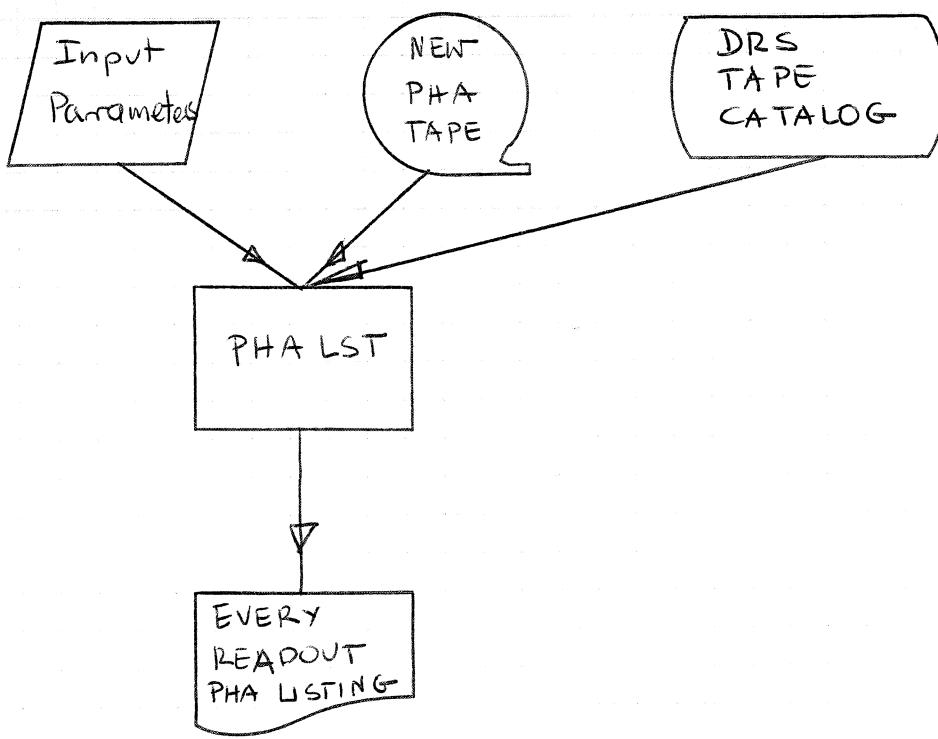
Pioneer Data Processing System

4. DRSMNT (Data Reduction System Maintenance)



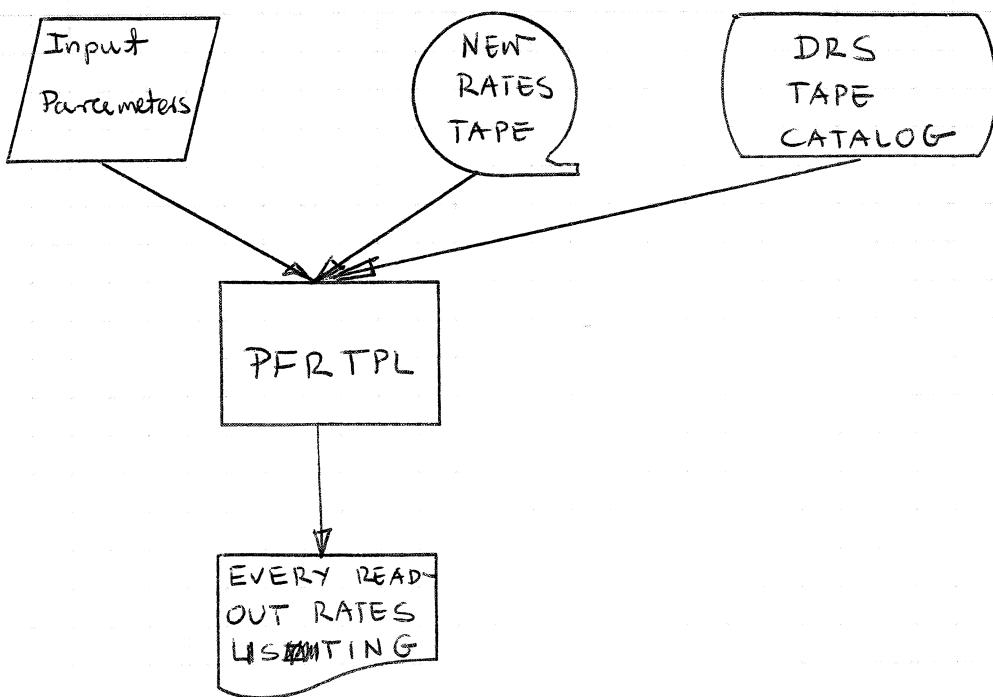
Pioneer Data Processing System

5. PHALST (Program for listing PHA tape)



Pioneer Data Processing System

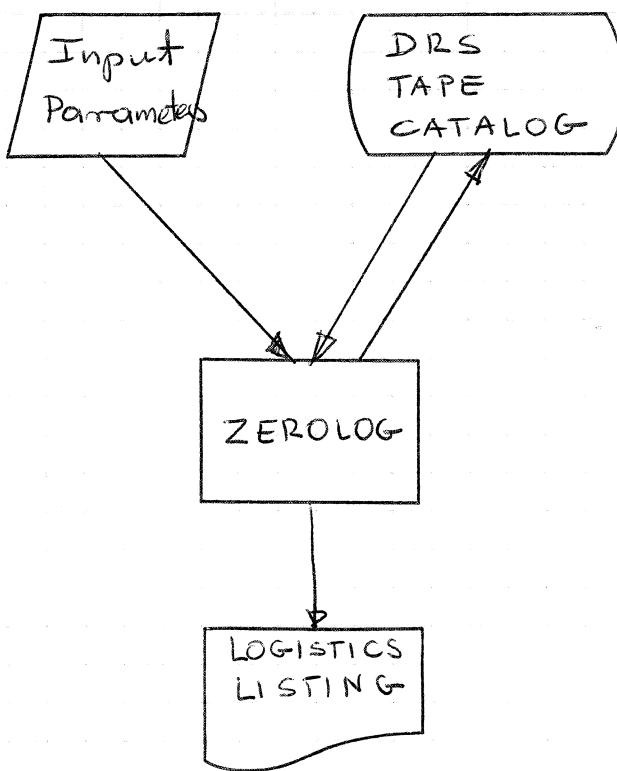
6. PFRTPL (Program for listing of RATES tapes)



Pioneer Data Processing System

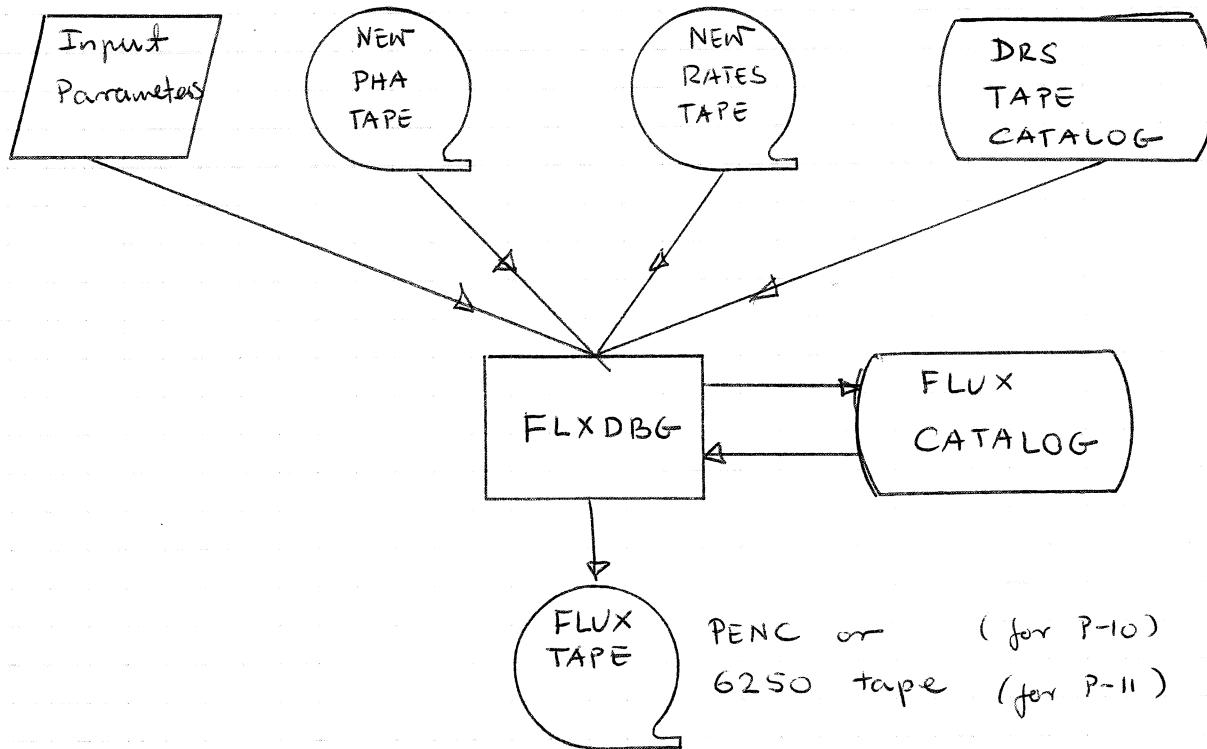
7. ZEROLOG (Backup and clear

Logistics catalog when
full)



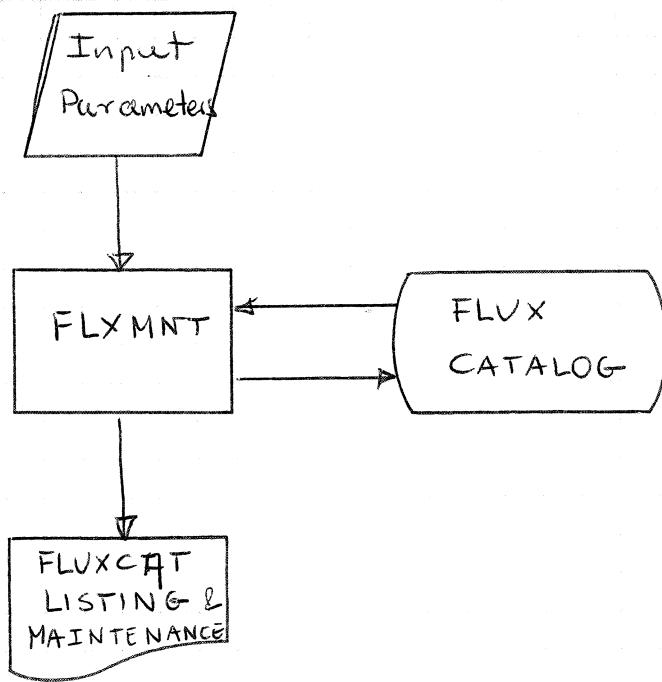
Pioneer Data Processing System

8. FLXDBG (Program for FLUX Data Base Generation)



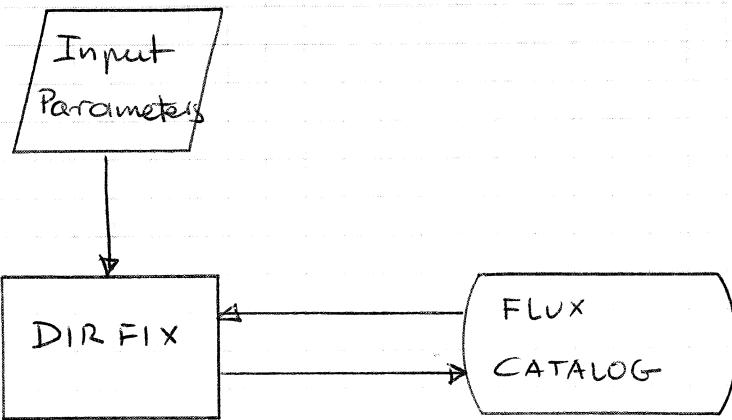
Pioneer Data Processing System

g. FLXMNT (Lists the Pioneer -F, -G,
Flux Catalog Sources)



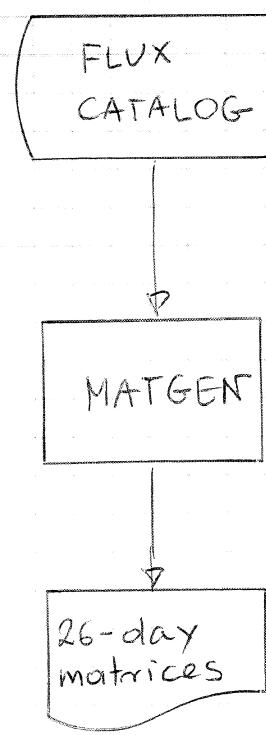
Pioneer Data Processing System

II. DIR FIX (Fixing of Flux Catalog directory)



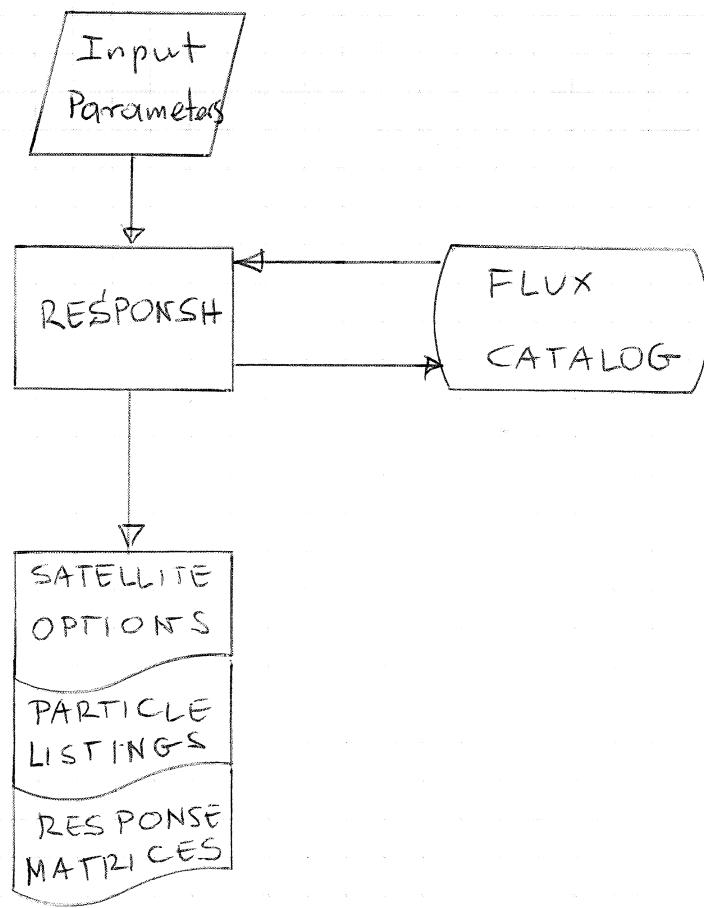
Pioneer Data Processing System

12. MATGEN (lists e.g. 26 day
matrices)



Pioneer Data Processing System

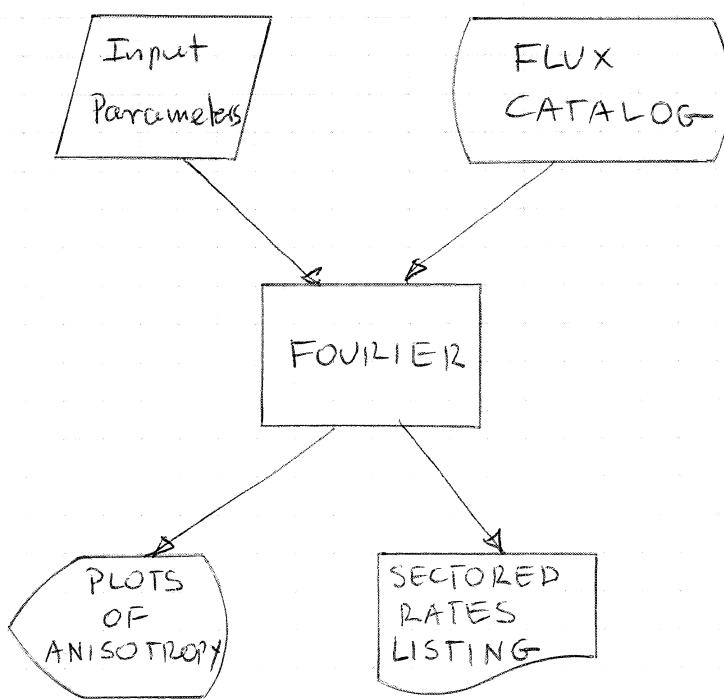
13. RESPONSE



Pioneer Data Processing System

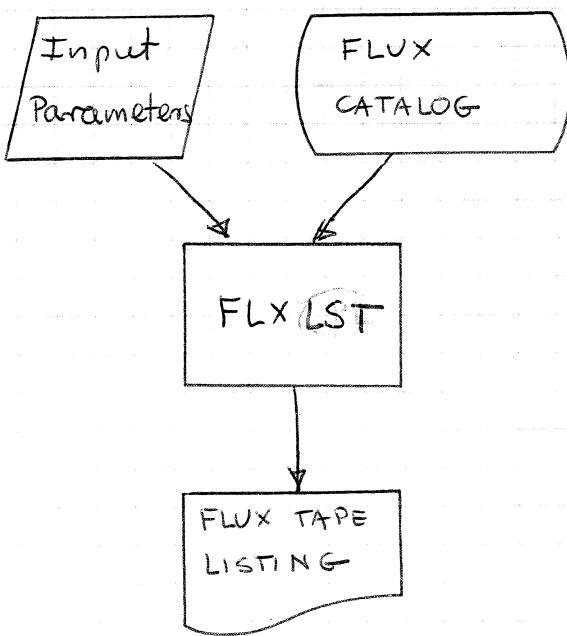
14. FOURIER

(Produces Listings/plots of
specified sectored rates)



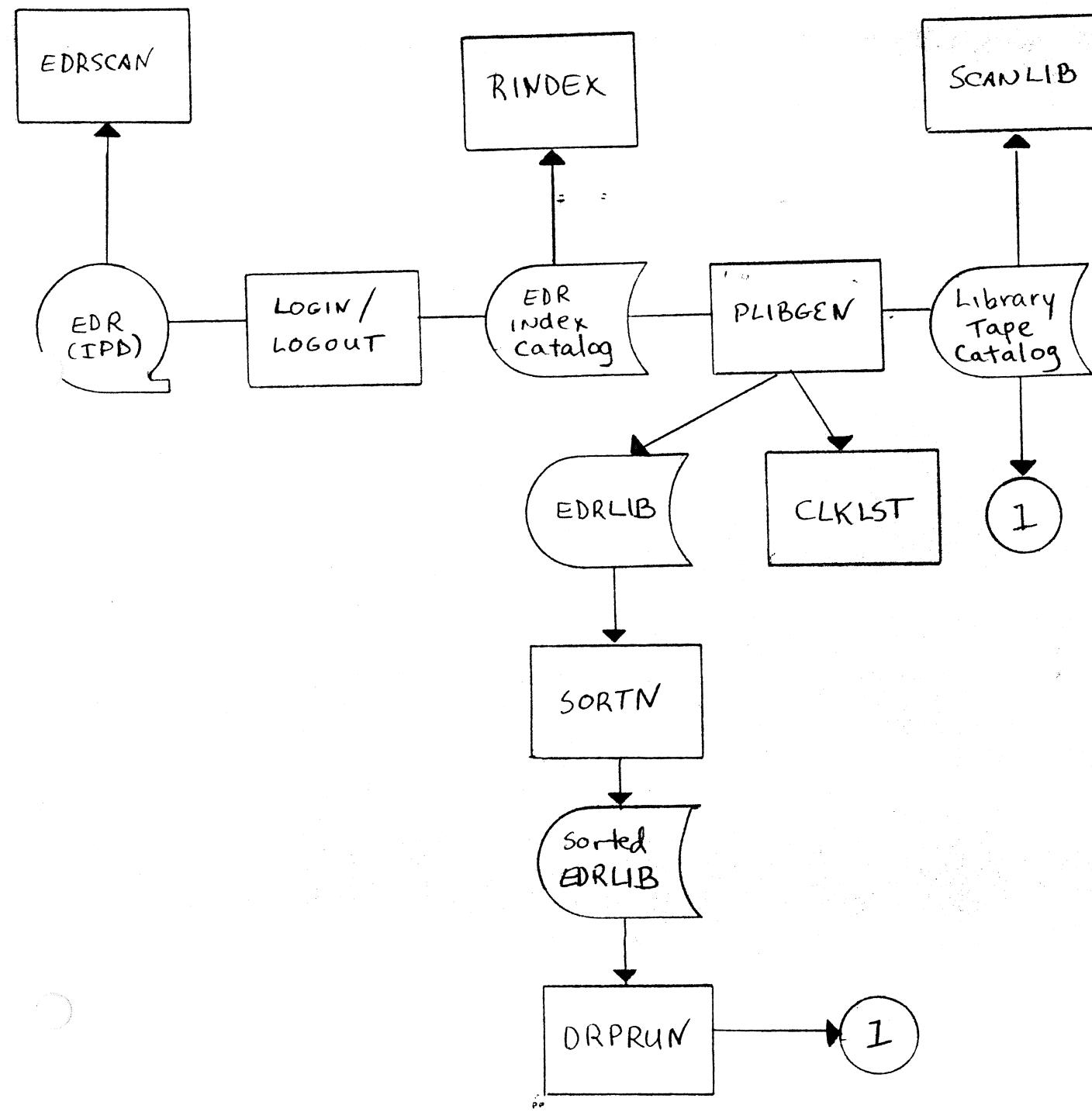
Pioneer Data Processing System

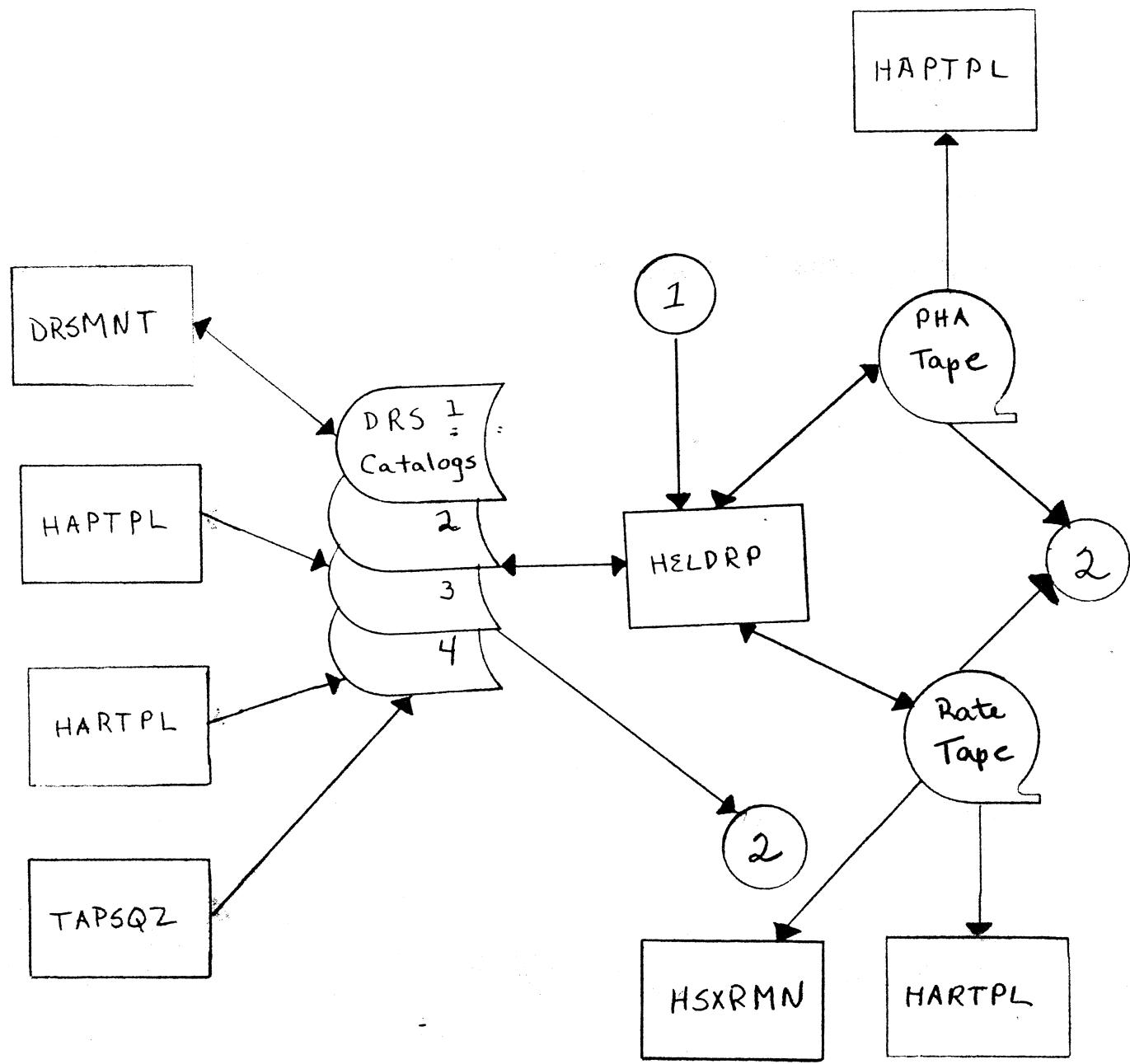
10. FLX TPL (Flux Tape Listing)

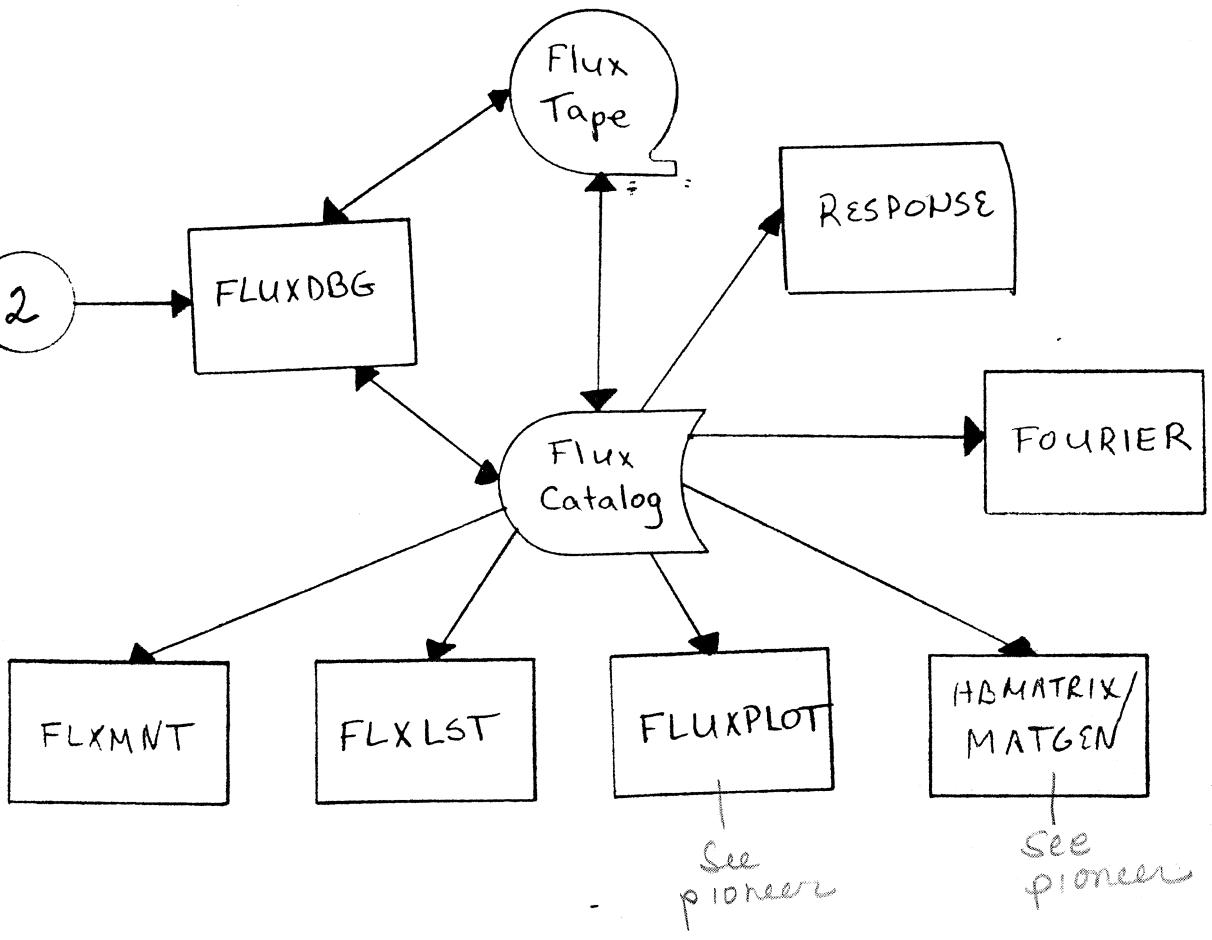


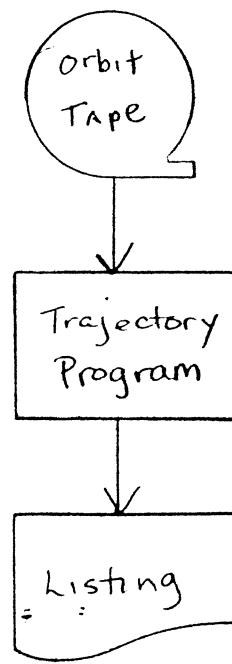
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Helios Data Processing System



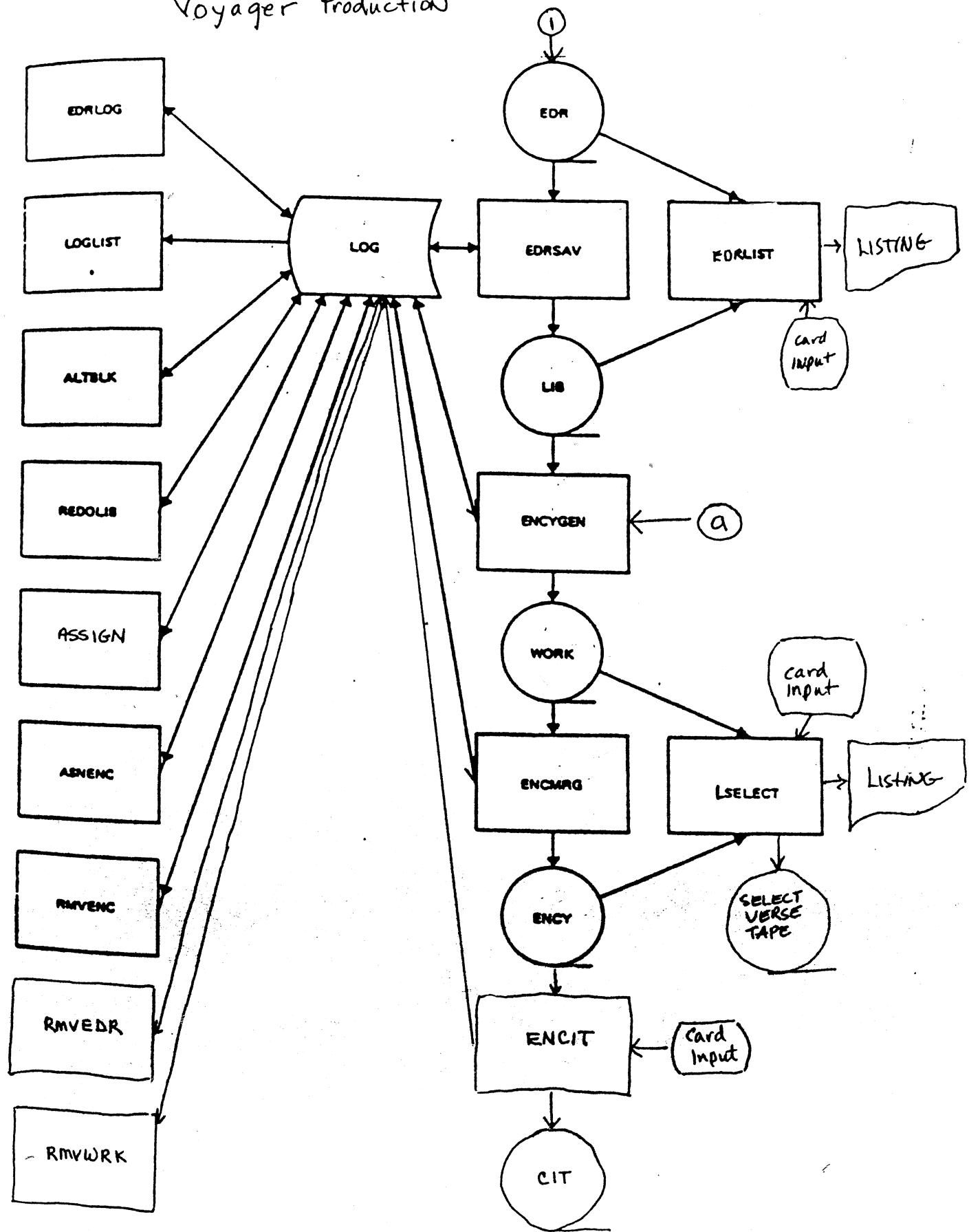






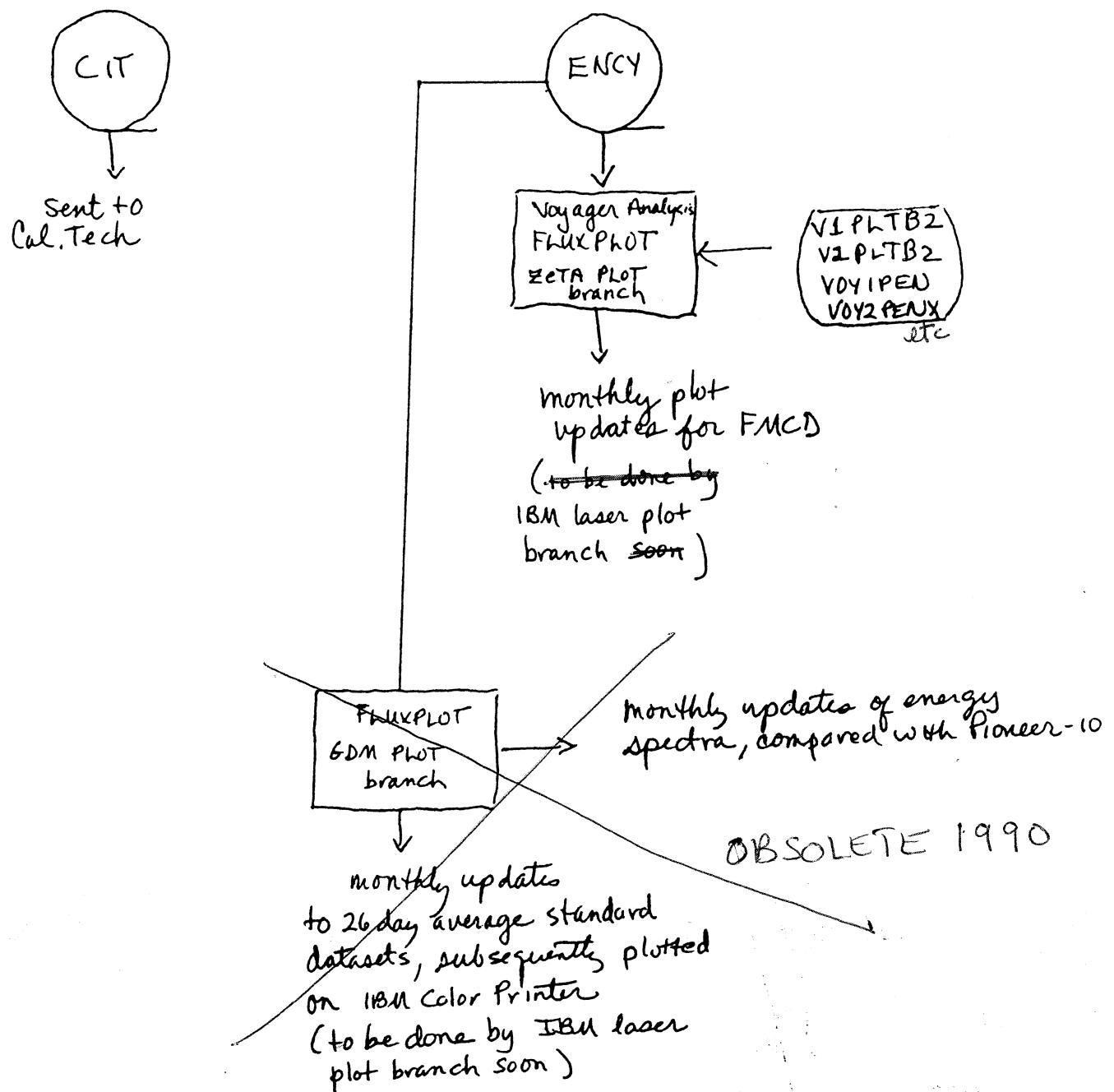
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Voyager Production



(continued)

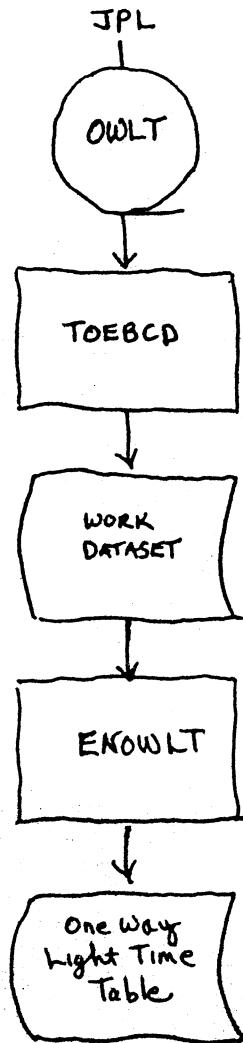
continued :



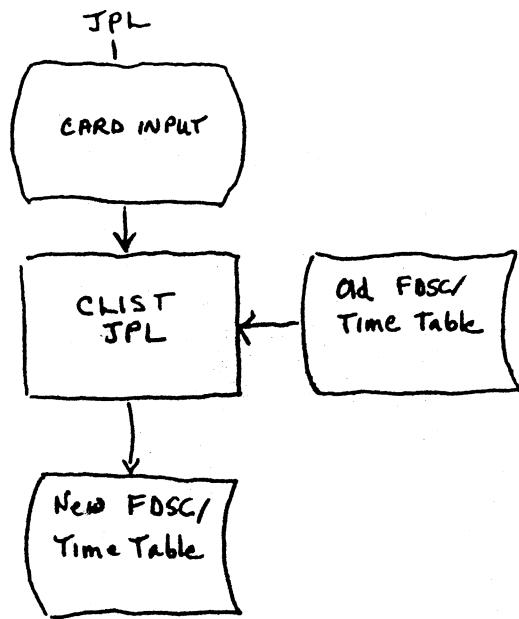
Backup tape copies are made routinely
for LIB and ENCY tapes.

(a) Preparation of tables required by ENCYGEN - Voyager

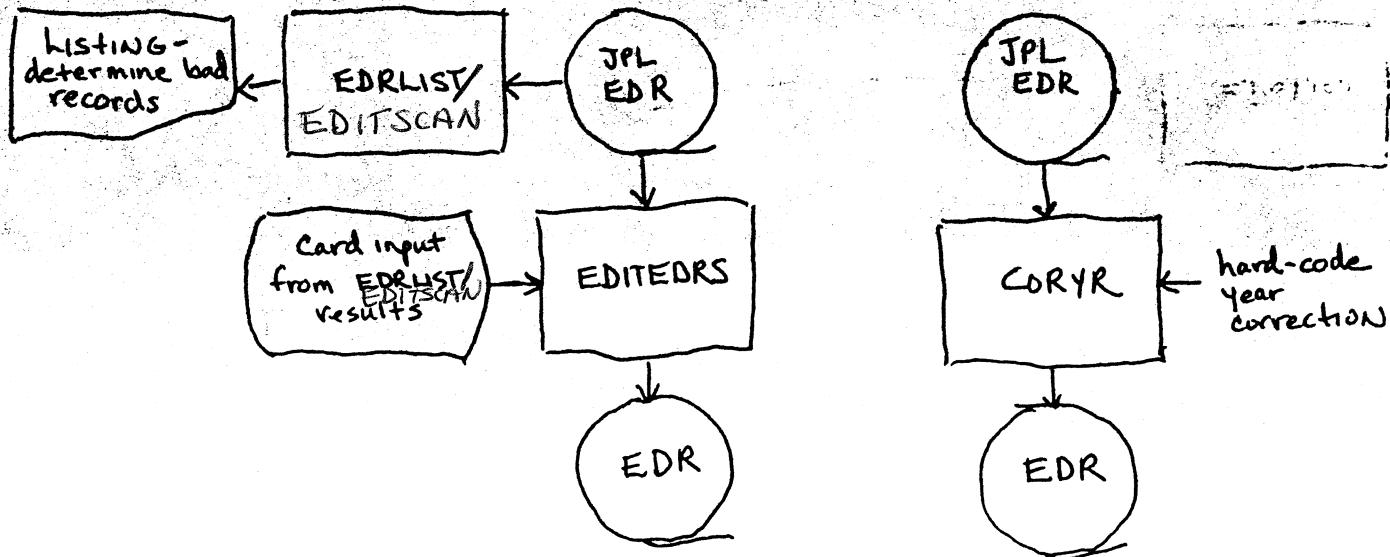
One Way Light Time Tables



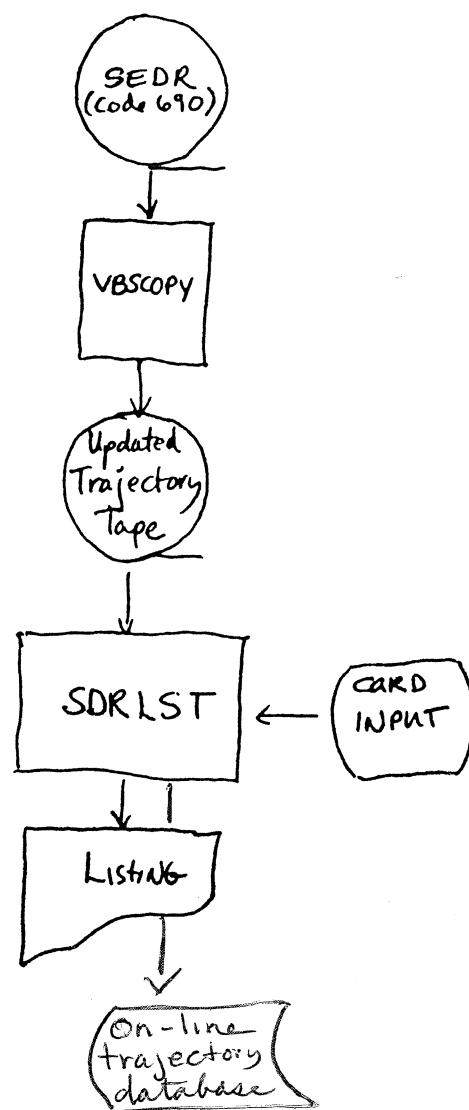
MOD60 FDSC / time Tables



- ① EDRs received from JPL may have bad data records, OR YEARS. As needed, two utility programs may be used to edit the original EDR, producing a new EDR which is input to the production system:

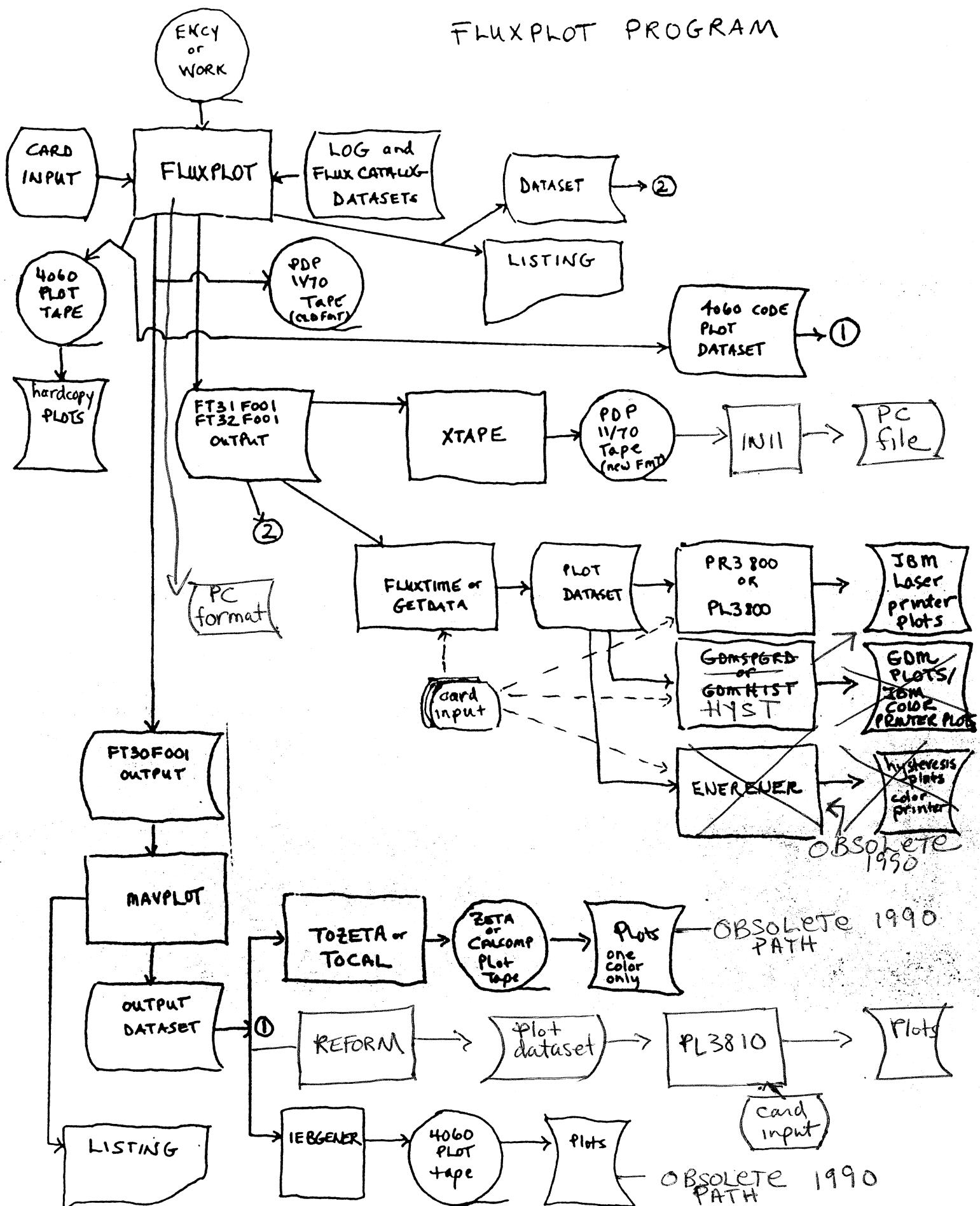


Voyager Trajectory Tapes



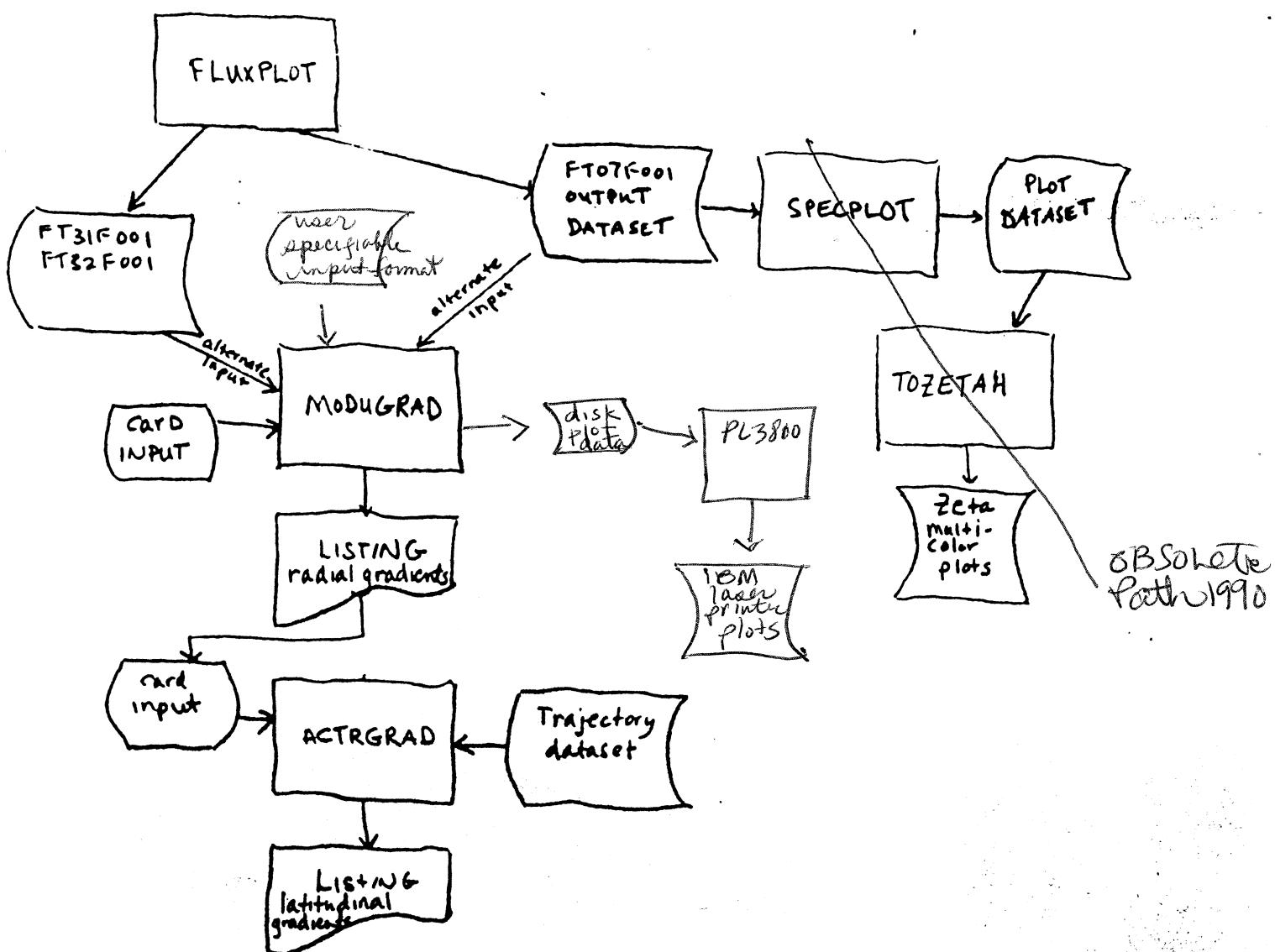
Voyager Analysis

FLUXPLOT PROGRAM



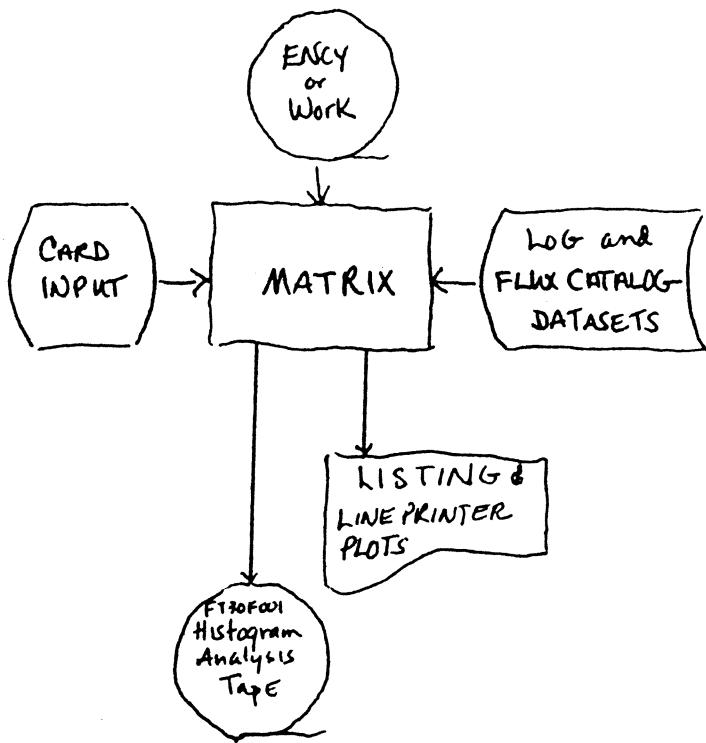
(2)

Voyager / ISEE FLUXPLOT



Voyager Analysis

MATRIX PROGRAM



Miscellaneous - Voyager

INTLOG initialize a LOG type dataset

LOGEXPND expand a LOG type dataset when full
(same as ISEE)

Statmon

Char system for status (ISPF Panels + tables used)

FLUX CATALOG maintenance:

INSTALV install a response table into FLUX catalog

OVERLAY overlay an existing FLUX catalog response table with revised energies and geometry factors

INVENTORY rewrite a FLUX CATALOG, eliminating unused and old response tables.

RESPONSI list Flux Catalog information and tables;
plot tables, if desired, on line printer

RANGES get a formatted listing of the FLUX CATALOG Particle Catalog ONLY.

CATMAN utility subroutines which affect the Particle Catalog of the FLUX Catalog.

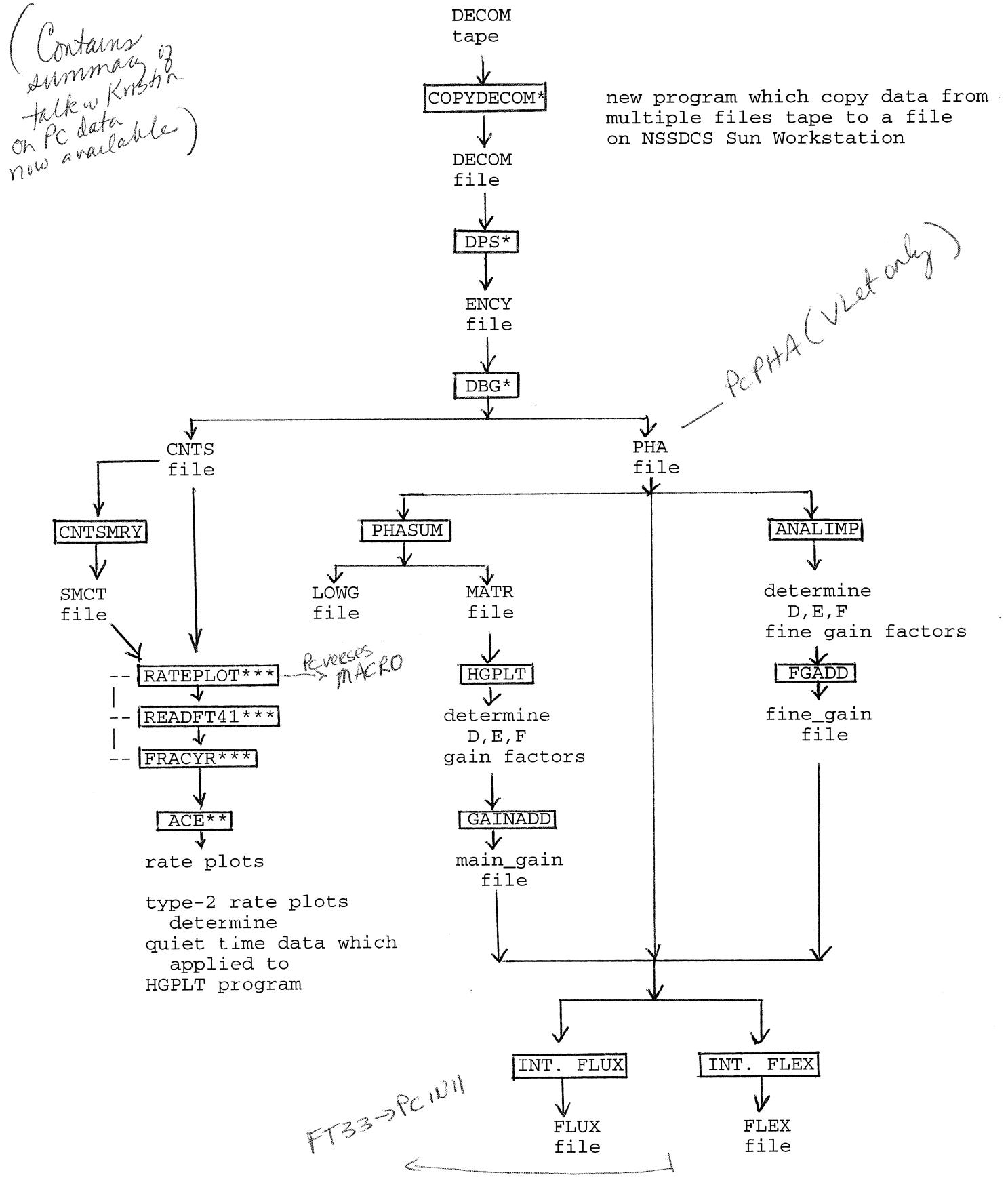
RESPONSE TABLE GENERATION:

TESTM generate particle Track data for the range/energy conditions of a HET

BX6NEW generate input for INSTALV or OVERLAY, using TESTM output as input to BX6NEW

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- The following data flow diagram shows all the necessary programs needed to generate the IMP-8 one INTERVAL FLUX and FLEX file on Sun workstation.



* indicates a working version program on Sun workstation

** indicates a graphical software

*** indicates RATEPLOT, READFT41 and FRACYR programs can be combined

IMP-8 CATALOG LISTING

PLAT	STORAGE	VOLUME	FILE	SAT	DATA	REEL	ST	SP	START TIME	STOP TIME	GENERATION TIME	FILE LENGTH
FORM	MEDIUM			ID	TYPE	SEQ	INT	INT				

RECORD 1

2 1 1 0 46 0 0 0 0 0 0 0 0 0 0 0

RECORD 2

0 0 0 0 50 0 0 0 0 0 0 0 0 0 0 0

Two proposed major files' name convention in the IMP system

1. file name of IMP Program source file

/home/voy386/cfgmgr/imp/source/SUN/satid/program/routine.f

satid : satellite ID

IMP6 for IMP 6 satellite
IMP7 for IMP 7 satellite
IMP8 for IMP 8 satellite

program : program name

dps for Data Processing System
dbg for Data Base Generator
...

routine : routine name

2. file name of IMP Data file

/home/voy386/cosmicra/imp/data/satid/type/file

satid : satellite ID

IMP6 for IMP 6 satellite
IMP7 for IMP 7 satellite
IMP8 for IMP 8 satellite

type : data type

DECOM for decom data
ENCY for ency data
CNTS for cnts data
PHAS for phas data
...

file : data file name

DECOMgggg for decom data
gggg indicate group number

ENCYssssss for ency data
ssssss indicate reel sequence number

CNTSiiii for cnts data
iiii indicate interval number

PHASiiii for phas date
iiii indicate interval number

...

List of number of lines in each assembler routine in the IMP-8 programs.

IMP-8 DATA PROCESSING SYSTEM (DPS)

COMPLETION

REMARK

BTMNP : 83	*
DTIME : 57	*
EXTRCT : 70	*
LOGDEC : 83	*
QUAL : 43	*
RETDAT : 30	*
RSEQ : 25	*
UNPACK : 324	*

IMP-8 DATA BASE GENERATOR (DBG)

BTMNP : 83	*
DTIME : 57	*
GENCNT : 316	*
GENPHA : 558	*
INTRVL : 27	*
LEDST2 : 303	*
TQDQFS : 56	*

IMP-8 PHA SUMMARIZER (PHASUM)

BTMNP : 83	*
DTIME : 57	*
JLB2CL : 29	
MERGE : 245	
RHISTI : 68	
SORT : 136	
SUMLED : 83	
SUMMED : 95	

IMP-8 HIGH GAIN PLOT (HGPLT)

BTMNP : 83	*
EVLIST : 83	
GTNODE : 104	
MTXADD : 329	
MTXCLR : 64	
MTXLOD : 274	
PHAUPK : 64	



IMP-8 ANALIMP

BTMNP : 83	*
EVLIST : 83	same as in HGPLT
EXTRC8 : 103	
LGPHAU : 123	
PHAUPK : 64	same as in HGPLT
RHISTI : 68	same as in PHASUM
TSTCAT : 113	

IMP-8 COUNT SUMMARY (CNTSMRY)

BTMNP : 83
DTIME : 57

*
*

IMP-8 VLET SUMMARY (VLTSMRY)

BTMNP : 83
DTIME : 57
TSTCAT : 113
IFLIP : 7
VLETPK : 42

*
* same as in ANALIMP

IMP-8 INTERMEDIATE FLUX (INTFLUX)

BTMNP : 83
DTIME : 57
EXTRCJ : 98

*

IMP-8 INTERMEDIATE FLEX (INTFLEX)

BTMNP : 83
DTIME : 57
EXTRCJ : 98

*
* same as in INTFLUX

IMP-8 TIME SUMMARY (TIMSUM)

BTMNP : 83
DTIME : 57
JLB2CL : 29
SUMLED : 83
SUMMED : 95
RHISTI :

*
* same as in PHASUM
same as in PHASUM
same as in PHASUM
same as in PHASUM

Informal talk with Kristin on Friday 1/14/94

Kristin's PC FLUX program takes PCPHAs as input and produces PCFLUX verses as output. It can currently handle IMP data (?exactly which) and ISEE data. It utilizes a version of the mainframe RESPONSE TABLES (=flux catalog) for ISEE, and the response tables for IMP-8 which Henry and Bob were working on (that implies only Vlet data).

Kristin's program does not calculate fluxes; this calculation is in the MACRO program.

Satellite data available now on PC:
(Don is actually the one to ask)

IMP-8:

Voyager:

The mainframe LSELECT program is run and the PCPHAs then run on the output of LSELECT to obtain PCPHAs.

PCPHA verse data:	Nov/Dec 77	47 Mb
	2 months of 78	78 Mb
	2 months of 79	88 Mb

The mainframe FLUXPLOT program is run with PCFLUX and PCRATE verses output.
PCFLUX verse data: For Voyager LETs only- launch thru end 1984
(no size estimate)

This data is a subset of the LET, of specific
energy bins of interest.

Pioneer:

No data is there yet. A program would need to be written, a variation of the Helios PCPHAs program, to be able to generate PCPHAs

An idea similar to what was done for the Voyager and ISEE FLUXPLOT program would have to be done to the Pioneer and Helios FLUXPLOT program to be able to get PCFLUX and PCRATE verses.

Helios:

The PCPHAs program reads the FLUX tapes, producing PCPHAs. They have all of the data which goes into PCPHAs for both Helios -1 and -2.

No PCFLUX or PCRATE verses databases from the mainframe.

They have a complete run of FOURIER anisotropy output for the Helios'.

ISEE:

The mainframe LSELECT program is run and the PCPHAs then run on the output of LSELECT to obtain PCPHAs.

PCPHA verses: They have a complete database of the data contained in this verse type.

The mainframe FLUXPLOT program is run with PCFLUX and PCRATE verses output.

PCFLUX verses: They have a subset of the whole, which includes the particles/ energy bins of interest.

PCRATE verses: ?

The mainframe FOURIER runs which create PCRATE type verses with sector data etc. in them to produce

Anisotropy data: They have a complete database of this data.

IMP PC useage- NOW

Data produced for PC in the current IMP system:

For IMP-8 there exist MED, LED and VLET detectors. IMP-8 rates may also be sectorized (==> anisotropy/magnetic field studies).

There are limitations on data available to the PC from existing pathways.

I. PCRATE, PCFLUX, PCPHA format

PCRATE and PCFLUX verses:

Rateplot program only gives selected averages from minutes up to 24 hours.

All rates are accessible from CNTS and SMCT tapes.

RATEPLOT [PC RATE verses only] -> fully IEEE PC file ready for Don's system to plot by MACRO (not directory)

Fluxplot can make unlimited averages.

Any of the defined FLUX BOXES and combinations are available, along with ONLY the event type rates and selected singles rates.

FLUXPLOT -> FT31,32 output format ----XTAPE--> FT33 output format == [IEEE PC data + reformat] ----IN11 job on PC ---> a MACRO ready file (not directory)

PCPHA verses:

Limited to VLET data only, thru PCPHA (reads CNTS tapes) version.

data is summarized in time granularity? per user
30 min, 1,4,6,12,24 hour averages.

Anisotropy data (PCRATE) format:

FOURIER -----> [PC RATE verses only] == fully IEEE PC file.
(CNTS)
(mag. data)

II. VAX pathway (replaced PDP11/70 pathway): [obsolete?]

VLTSMRY8 -> VLET output format --(microvax)TPFORV--> VLT output format ==
(CNTS) [IEEE VAX data] ----(microvax)SPECTR--> FLM ==
[IEEE VAX data] ----(microvax)MAKEIN11---> FT33==
[IEEE PC data] ----IN11 job on PC --->
a MACRO ready file (not directory)

Study of HGPLT8 program / easy replacement of Dalton's sparce matrix handling assembly language routines?

Yes. These routines reference a unique matrix (of possibly many requested in the job) and output a 128 X 128 matrix derived from the linked-list method.

An N-dimensional 128 X 128 array can be used instead and the matrices populated from the values in the Dalton routine arguments.

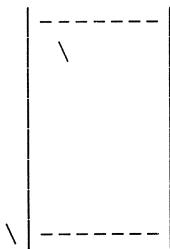
There are some small assembly routines which need conversion here that have to do with requested matrix definitions vs. the possible event types.

*****-----

The HGPLT8 program in gain factor determination-

standard gate
location
rectangle

<-- E1 or E2



^
| minimum ionizing point for HE

PHA value 2 or 3 ->

PHA value 1 or 2

possible particle trajectory

just exit 1
 E_0/n

detector element 1 (D)

just exit 2
at energy $E_1/n \rightarrow$

detector element 2 (E)

just exit 3
at energy $E_2/n \rightarrow$

detector element 3 (F)

The HGPLT8 program has gating and histogram/cenroid calculation tools which follow the extent of shifting of the minimum ionizing HE peaks for the MED D vs E and D vs F matrices for the D.E.F.-G event type. Shifts of the peak locations occur with time. (due to the detector material/aging/degradation process).

For proper calibration and comparison with fluxes along the satellite life the locations of these peaks are normalized to the launch locations. The program incorporates the main gain table values and/or the program input centroids (=geometry factors) determined from previous calculations into the PHA data before making the plot. An iterative process is used where the centroid locations are used as the input gain factors for the next iteration, until the centroid values fall within certain defined limits of acceptance.

For Don's MATRIX plot program (2D) to perform the same function as HGPLT8, it would have to have these gating/ calculation tools added. We would also need a PCPHA type program for the MED events. That program would read PHAS and possibly CNTS tapes and produce PCPHA verses for the 2D program.

ANALIMP8 functions: (from documentation study)

$$Y = \frac{BX}{\frac{Ae}{D} + E}$$

Theoretical location of Y pulse height given X pulse height
(a function of atomic charge and atomic weight)

Histogram studies show the distribution of events around a standard event curve, which is expressed by the equation above. A,B,C,D, and E are constants which vary with the particle being analyzed and the detector.

X is the B (LED) or E (MED) channel

Y is the A (LED) or D (MED) channel

A box is drawn over the pulse height matrix for the event type of interest using the matrix scanning gates input by the user. Each data point in the box is examined. The distance (either perpendicular or vertical) from the data point to the curve is calculated. If the distance (as channels) is 24 or less channels, the energy of that point is calculated using the equation below:

$$\text{Energy} = A + B + (CX - D)^{\frac{E}{1/E}}$$

Energy of pulse height channel X

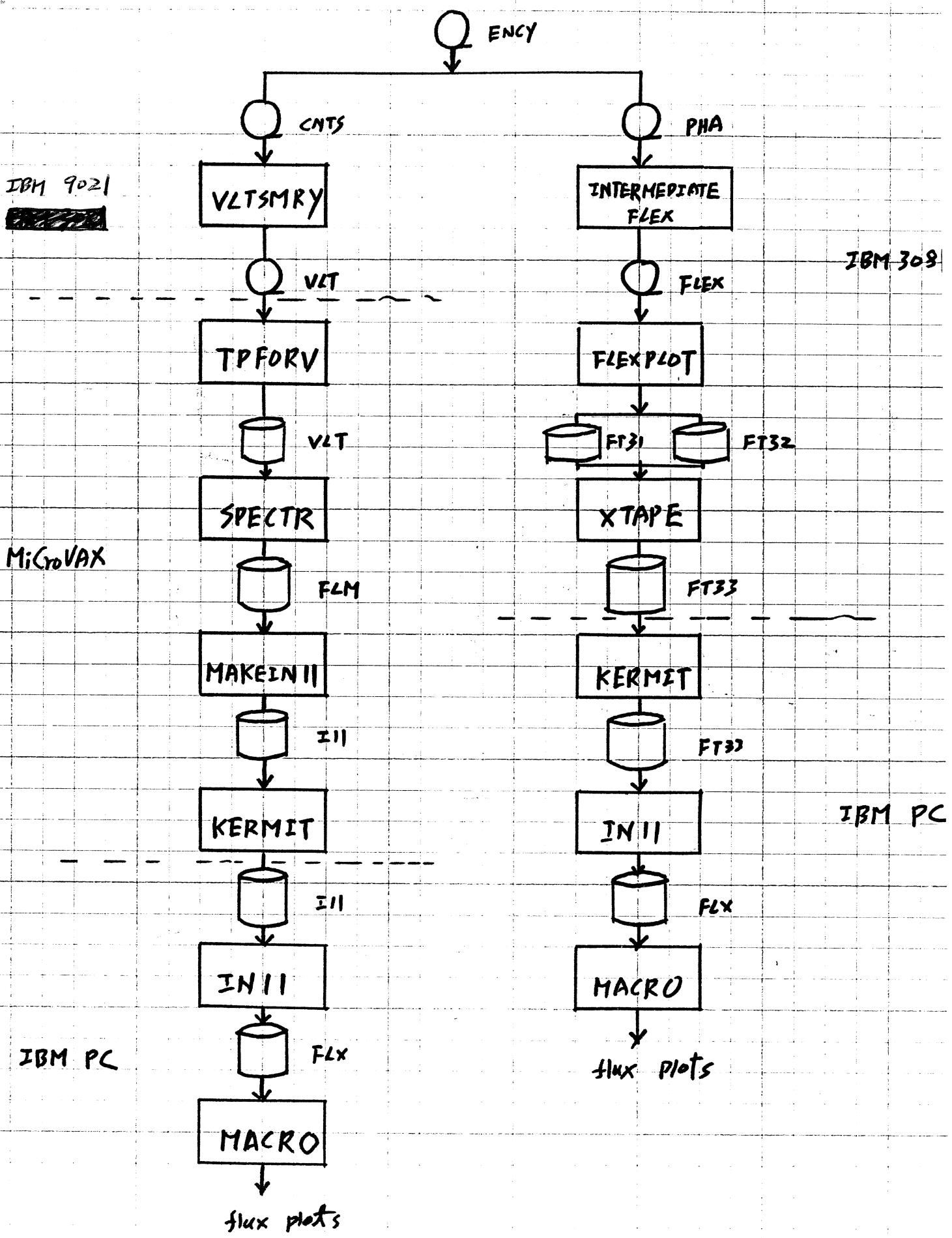
The constants are hard-coded values for the particle of interest, which come from data track fitting work. (They are not the same constants as the track location constants.)

There is a different equation for MED alphas but the idea is the same.

X is the B (LED) or E (MED) channel value.

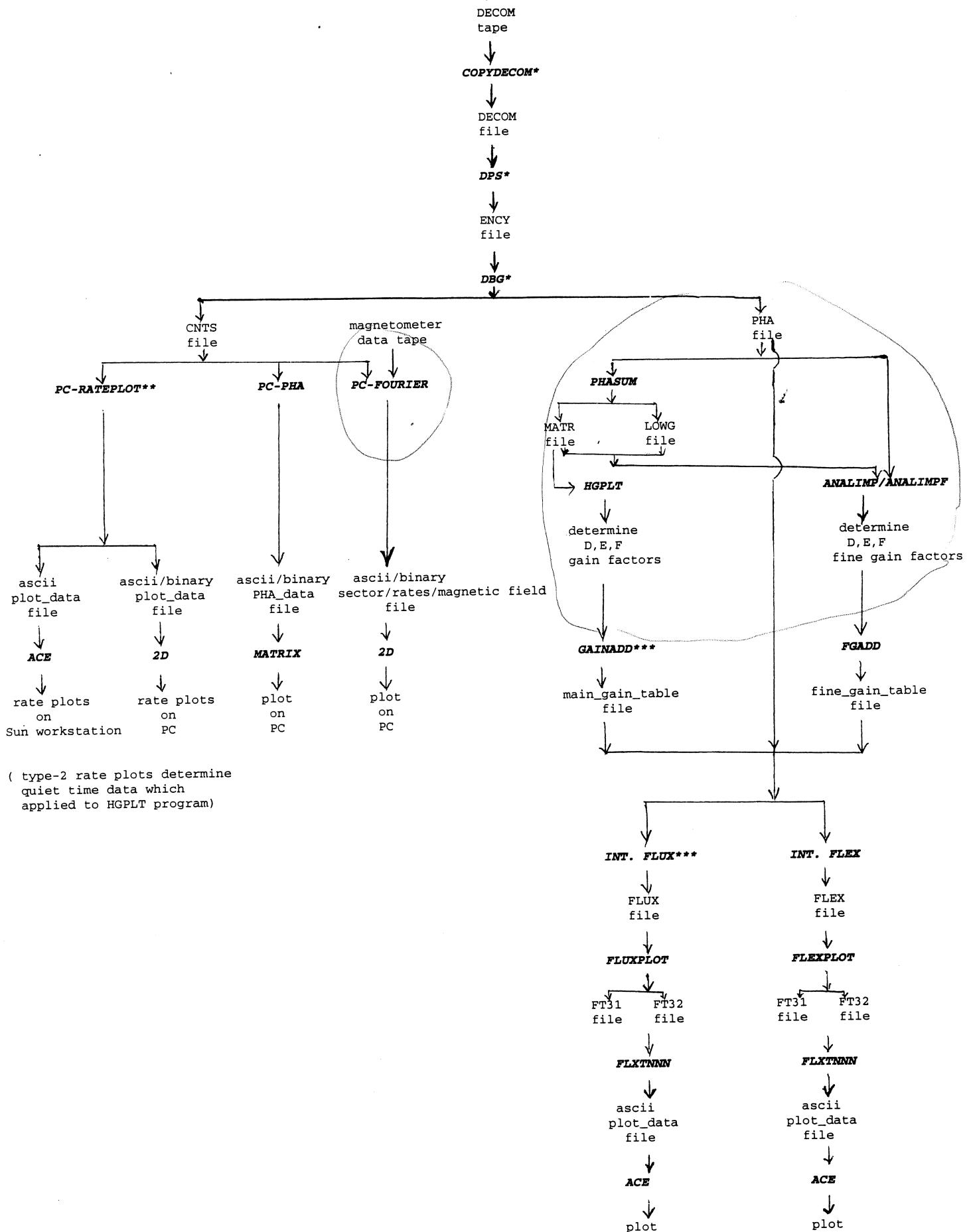
If the energy falls within the energy limits (user specified) for any of the histograms, the event count for that point is added to the appropriate histogram array. Data point lists and a line printer type histogram graphical output are produced.

Analimp8 can also be used to just plot matrices, as can HGPLT8
We have a version of Analimp8, ANLIMP8F, which allows application of
finegain tables (as well as the normal main gain tables) to the study,
which Bob uses for finegain factor determination.



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IMP-8 data flow diagram on Sun workstation



* indicates a working version program on Sun workstation

** indicates a working version program which generate ascii plot-data file on Sun workstation

*** indicates a preliminary working version program on Sun workstation

ACE is a graphical software on Sun workstation

2D, MATRIX are Low-Energy-Particle-Group Graphic Analysis programs on PC

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PROPOSED PLAN 3)

TO MOVE IMP-8 SOFTWARE FROM IBM 9021/MVS SYSTEM TO Sun SPARCstation

LG PLTB 183039
7 V02.84110

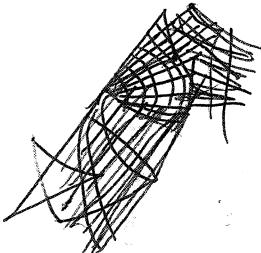
IMPB01
MPB02

Try f308
f28

IMPB01 file 490
IMPB02 313

LG PLTB on CR system

file 71 IMPBK3



1. INTRODUCTION :

The purpose of this document is to provide a general overall effort to move the IMP satellite data production programs, analysis programs and utility programs from the IBM 9021/MVS system to the Sun SPARCstation. Three major approaches are needed to complete the move as follows.

A. Software :

The general concept is to minimize the changes of the codes in the program as possible. Several key changes are described as follows.

Convert the source routines coding in IBM assembler language to FORTRAN or C on Sun SPARCstation.

Local routines on IBM 9021/MVS system need to be replaced either by local routines doing same function on Sun SPARCstation or by new developed routines.

EBCDIC data on IBM 9021/MVS system need to be converted to ASCII on Sun SPARCstation.

Floating point data on IBM 9021/MVS system need to be converted to IEEE floating point on Sun SPARCstation.

Change the routines coding in FORTRAN in the program if they do not comply with the syntax on Sun SPARCstation.

Eliminate unneeded paths.

B. Data storages:

Change the data storages in the programs from tapes or cartridges system to file system on Sun SPARCstation.

C. IMP tape catalog

IMP tape catalog needs to be implemented in different form other than the current tape catalog. Also it could be compatible with other satellites PIONEER, VOYAGER, ISEE and HELIOS databases. This issue is proposed by Pam Schuster.

2. CONVERSION OF ASSEMBLER ROUTINE :

Due to the lack of document describing the assembler routines, the method we applied to the conversion is to transform the assembler codes to FORTRAN/C strictly based on the logical structure flow in the assembler routine. After each assembler routine is converted, we need to do initial test and verify that the converted routine is precise.

3. DATA STORAGES :

The input/output data flows in the current software on IBM 9021/MVS system are stored on IBM 6250 tape or cartridges. The data on Sun SPARCstation will be stored on hard disk which means that the data will be in file structure. To approach the completion, the IBM system library FTIO in the program need to be modified to access the input/output data by files instead of tapes or cartridges.

Also the IBM 9021/MVS system library DAIO (i.e. DREAD, DWRITE) need to replace by FORTRAN READ and WRITE. Other IBM routines such as INCORE, KCLC, FMOVE etc. also need to be replaced.

4. IMP TAPE CATALOG :

At present on IBM 9021/MVS system, the IMP tape catalog is applied on all software. It plays a key role in the IMP data base system.

We have a proposed IMP tape catalog on Sun SPARCstation. The major difference of the proposed catalog is that each line represents an entry of one data type(except data type ENCY) which contains one INTERVAL (4 days) data only. However, the ENCY data type contains 3 INTERVALS data.

The DECOM data are not in INTERVAL base. If we want to include the DECOM information (i.e. DECOM group number, data start/stop time) in the catalog, we need to develop a software to do this process.

A sample listing of the proposed IMP tape catalog is shown at the end of this proposal.

A detail description of the proposed IMP tape catalog is as follows.

A. SATELLITE ID :

TYPE : CHARACTER
VALUE : IMP6
IMP7
IMP8

B. DATA TYPE :

TYPE : CHARACTER
VALUE : DECO
: ENCY
PHAS
CNTS
SMCT
MATR
LOWG
FLUX
FLEX
VLET
BLNK

C. STARTING INTERVAL NUMBER : THIS NUMBER ONLY APPLY TO DATA TYPE ENCY, PHAS, CNTS, SMCT, MATR, LOWG, FLUX, FLEX, VLET
TYPE : INTEGER
VALUE : 1 - ????

D. STOPPING INTERVAL NUMBER : THIS NUMBER ONLY APPLY TO DATA TYPE ENCY
TYPE : INTEGER
VALUE : 1 - ????

E. GENERATION DATE :

TYPE : INTEGER
VALUE : FIRST 2 DIGITS IS YEAR NUMBER
NEXT 3 DIGITS IS JULIAN DAY
(e.g. 93090)

F. GENERATION TIME :

TYPE : INTEGER
VALUE : FIRST 2 DIGITS IS HOUR
NEXT 2 DIGITS IS MINUTE
NEXT 2 DIGITS IS SECOND
(e.g. 122538)

G. REEL SEQUENCE NUMBER : THIS NUMBER CAN REPRESENT DECOM GROUP NUMBER
FOR DATA TYPE DECO
TYPE : INTEGER
VALUE : ?????

H. DATA START/STOP YEAR :
TYPE : INTEGER
VALUE : 4 DIGITS NUMBER
(e.g. 1993)

I. DATA START/STOP TIME OF YEAR :
TYPE : INTEGER
VALUE : IN TENTH SECOND OF YEAR

J. FILE LOCATIONS :
TYPE : CHARACTER
VALUE : FIRST 4 CHARACTERS IS SYSTEM IDENTIFIER
NEXT 2 CHARACTERS IS STORAGE MEDIUM
NEXT 4 CHARACTERS IS VOLUME NUMBER
NEXT 3 CHARACTERS IS FILE NUMBER

SYSTEM IDENTIFIER : IBM
SUN
PC

STORAGE MEDIUM	MAIN FRAME	SIZE
4 mm DAT cartridge	Sun SPARCstation	1.2GIGA BYTE
HD : HARD DISK	Sun SPARCstation	1.3GIGA BYTE
OD : OPTICAL DISK CARTRIDGE (1024 BYTES/SECTOR)	IBM PC	325M BYTES/SIDE

VOLUME NUMBER : 4 DIGITS NUMBER

FILE NUMBER : 3 DIGITS NUMBER

K. FILE LENGTH :
TYPE : INTEGER

5. PRIORITY OF ORDER OF CONVERTING IMP-8 SOFTWARE

- A. Data Processing System
- B. Data Base Generator
- C. Utility programs
- D. RATEPLOT
- E. PHA Summarizer
- F. High Gain Plot
- G. Gain Table Generation
- H. Intermediate FLUX
- I. Intermediate FLEX
- J. Fluxplot
- K. Flexplot
- L. ANALIMPF
- M. Fine Gain Table Generation
- N. VLT Summary
- O. ANALIMP
- P. Count Summary
- Q. Time Summary
- R. PCPHA
- S. FOURIER
- T. DBTIME

6. STATE OF CONVERSION :

- A. Data Processing System (DPS)

Completion :

The following assembler routines QUAL, EXTRCT, RETDAT, RSEQ, UNPACK, GETPUT, IGET, and MACROS GETBIT, SEQ2, SEQ4, PHA have been converted to FORTRAN codes.

Test :

The current version only creates one reel sequence ENCY dataset if the DECOM data time cross the ENCY time boundary. Implementation of software will be continue. IBM 9021/MVS local routines DATIMX, REMTIM, EXIT, FILEINF, DREAD and DWRITE in the program will also be replaced by similar local routines on Sun SPARCstation.

DECOM tape :

The current DECOM data is stored in IBM 6250 tape which contains multiple files. However the new software only processes the disk dataset instead of tape. To meet this requirement, we developed a utility program which copies all the multiple files of DECOM tape into a disk dataset in a designed format on IBM 9021/MVS system. The format is that at each end of tape file, we put an end file mark record on the disk dataset, also we put an end volume mark record at the end of disk dataset.

B. Data Base Generator (DBG)

Completion :

The following assembler routines GENPHA, GENCNT, LEDST2, TQDQFS, INTRVL, DTIME, FTIME, and MACRO SUM in GENPHA have been converted to FORTRAN codes.

Three new routines FULLNAME, q9ie32 and julday were added in.

TEST :

The current version can process the data through the proposed IMP tape catalog on Sun SPARCstation.

7. PROPOSED PLAN :

A. SOFTWARE :

Basically, we will continue to move the remaining IMP-8 software based on the priority and use the same approaches described in the introduction section.

The following lists are the assembler routines need to be converted in each IMP-8 program. The name inside the bracket was converted.

a. PHA Summary Program :

MERGE, RHISTI, JLB2CL, SUMLED, SUMMED, SORT, [DTIME], [BTMNP]

b. High Gain Plot Program:

PHAUPK, EVLIST, MTXADD, GTNODE, MTXCLR, MTXLOD, [BTMNP]

c. ANALIMPF Program :

PHAUPK(same routine in High Gain Plot Program)

EVLIST(same routine in High Gain Plot Program)

RHISTI(same routine in PHA Summary Program)

TSTCAT, LGPHAU, EXTRC8, [BTMNP]

RAND source routine can not be located

d. Intermediate Flux Program :

EXTRCJ, [DTIME], [BTMNP]

RAND source routine can not be located

- e. Intermediate Flex Program :
EXTRCJ(same routine in Intermediate Flux Program)
[DTIME], [BTMNP]
RAND source routine can not be located
- f. Fluxplot Program :
[BTMNP]
- g. Flexplot Program :
[BTMNP]
- h. ANALIMP Program :
PHAUPK(same routine in ANLIMP8F program)
EVLIST(same routine in ANLIMP8F program)
TSTCAT(same routine in ANLIMP8F program)
LGPHAU(same routine in ANLIMP8F program)
RHISTI(same routine in ANLIMP8F program)
EXTRC8(same routine in ANLIMP8F program)
[BTMNP]
- i. VLT Summary program :
TSTCAT(same routine in ANLIMP8F program)
IFLIP, VLETPK, [BTMNP], [DTIME]
- j. Count Summary Program :
[DTIME], [BTMNP]
SORT source routine can not be located
- k. Time Summary Program
JLB2CL(same routine in PHA Summary Program)
SUMLED(same routine in PHA Summary Program)
SUMMED(same routine in PHA Summary Program)
RHISTI(same routine in PHA Summary Program)
[DTIME], [BTMNP]

One potential path if we can't do the plotting on IBM 9021/MVS, eventually we would hope to look up the development of the plotting software on Sun SPARCstation.

Due to lack of SD4060 plotting package on Sun SPARCstation, we plan to use alternate way to generate rate plots. Three programs need to be executed to generate the rate plot. The RATEPLOT and READFT41 programs on IBM 9021/MVS system need to be converted. All the SD4060 plotting routines in RATEPLOT will be removed.

The following steps will generate the rate plots that was previously generated by the PL3800 plot program.

- a. generate FT41 dataset from RATEPLOT program
- b. run the READFT41 program to create a rate_dataset of which the format will be accepted by ACE program
- c. run ACE program to generate rate plot

Two programs PHA summary and High Gain Plot need to be converted on Sun SPARCstation before we can calculate the flux data.

The following steps will generate flux data.

- a. PHA Summary program generates the MATR data
- b. High Gain Plot reads the MATR data to determine the gain factors
- c. Gain Table Generation program generates the gain table
- d. Intermediate flux program uses the gain factors to calculate the flux data

Once we have flux data, we plan to use an alternate way to generate fluxplot/flexplot. Three programs need to be executed to generate fluxplot/flexplot. The following steps will generate the plots.

- a. generate FT31, FT32 datasets from FLUXPLOT/FLEXPLOT program

- b. run the GETDATA program to create spectrum plot data of which the format will be accepted by the ACE program, or run the FLUXTNNN program to create time history plot data of which the format also will be accepted by the ACE program
 - c. run the ACE program to generate plots, or the path running the program XTAPE (on IBM 9021/MVS system) , IN11 and CROSS (on IBM PC) programs.
- IN11 and CROSS (on IBM PC) programs.

B. IMP DATABASE :

Transfer :

Issues of moving the existing IMP-8 database from IBM 9021/MVS system to Sun SPARCstation :

- a. move data type ENCY, CNTS, and PHA which need large space to Convex UniTree, whenever you need on Sun SPARCstation, you can transfer the data files through FTP.
- b. move other data type which need small space to Sun SPARCstation
- c. run system program IEBGENER on IBM 9021/MVS system and transfer data files through FTP.

Filename :

The data on Sun SPARCstation will be in file structure. The file name for each data type includes satellite ID, data type, reel sequence number, interval numbers and generation date.

Each data type will be grouped in separate subdirectory under the same satellite ID directory.

Space :

Estimation of space needed for full coverage of each data type per interval (4 days)

ENCY	:	11.2M bytes
CNTS	:	4.8M bytes
PHAS	:	6.2M bytes
MATR	:	1.4M bytes
SMCT	:	0.5M bytes
FLUX	:	0.6M bytes
FLEX	:	0.6M bytes
LOWG	:	0.4M bytes
VLET	:	22K bytes

The total space to store all the IMP-8 data type from interval 101 (10/28/1973) to interval 2125 (12/31/1995) will be about 52 Giga bytes.

The disk space available on hard disk in our VOY386 is about 1.3 Giga bytes, these space will be shared by all the satellite data in cosmic ray group.

In our calculation, it is impossible to put all the IMP-8 database and other satellites database in the current hard disk.

Issues of storages :

- a. buy large storage hard disk ?

Archive :

Due to space limit on hard disk, we could archive the unused

data to other storage medium. After archiving the data, the IMP tape catalog also needs to be updated.

Issues of archive :

- a. archive software ?
- b. archive storage medium ?
(optical disk cartridge, 4 mm DAT cartridge)
- c. what kind of data type ?
(DECOM, ENCY, etc)

C. OPERATION :

The basic requirements to run the IMP programs on Sun SPARCstation are the input parameter(INTERVAL number or time ranges) and the active input/output file in present working directory (PWD). The most important thing is that we need enough working space to process all the input/output files.

We plan to design a shell program which can run user's selected IMP program automatically. The user only provide a limited input informations such as program number, interval number, decom group number or time range etc., The shell program will do the rest of work.

The following functions are planned to be included in the designed shell program.

- A. provide a number corresponding to each IMP program
- B. select the IMP program
- C. search the required data file
- D. retrieve the archived data file
- E. execute the IMP program
- F. archive the data
- G. listing of catalog

8. Milestone :

The time needed for moving each IMP program from IBM 9021/MVS system to Sun SPARCstation depends on the major factors as follows.

- A. number of assembler routines need to be converted
- B. complexity of the assembler routine

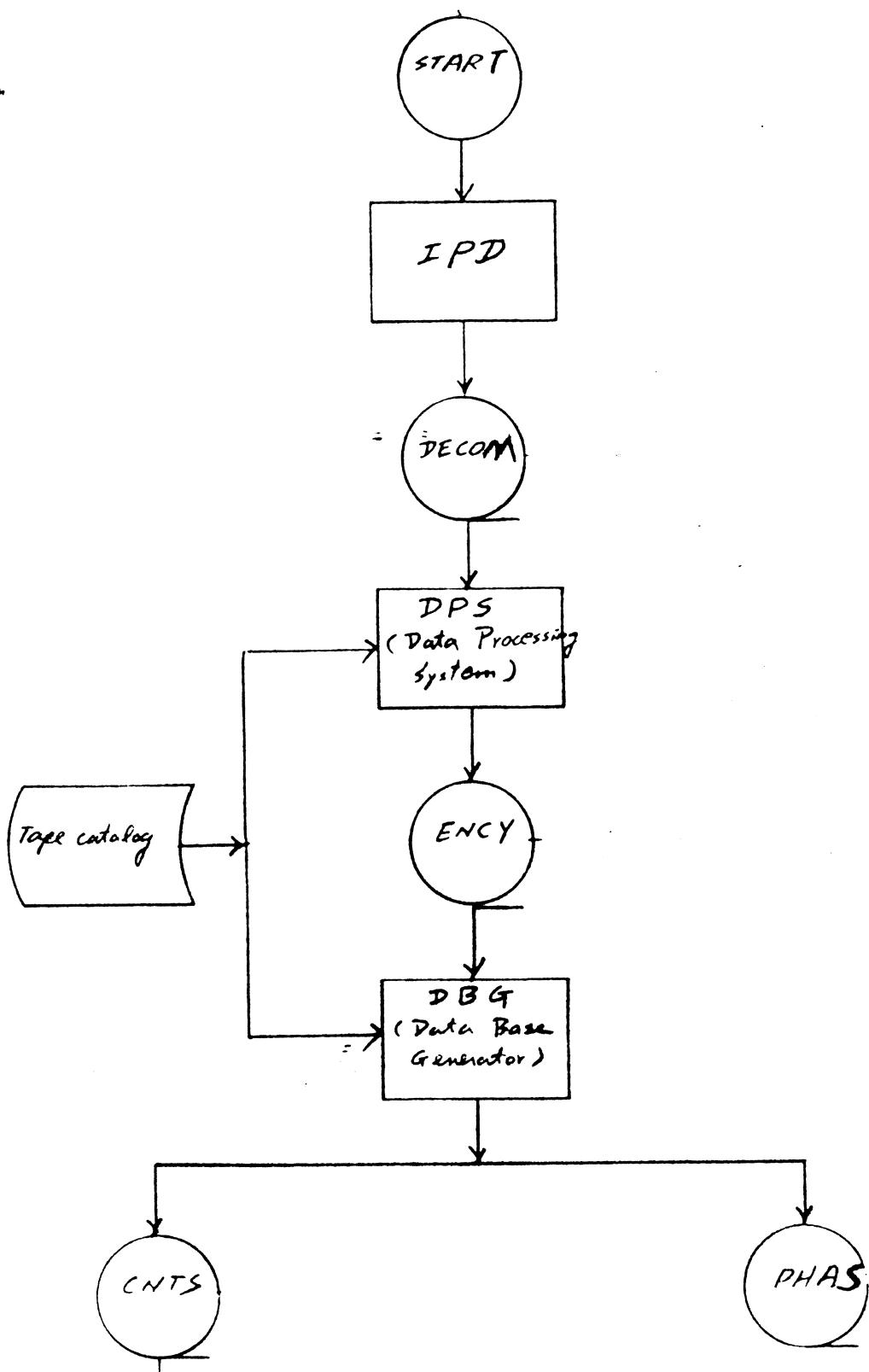
Besides the conversion of assembler routines, each program will take about 4 to 6 weeks to complete the move that includes other changes that mentioned in introduction section and test.

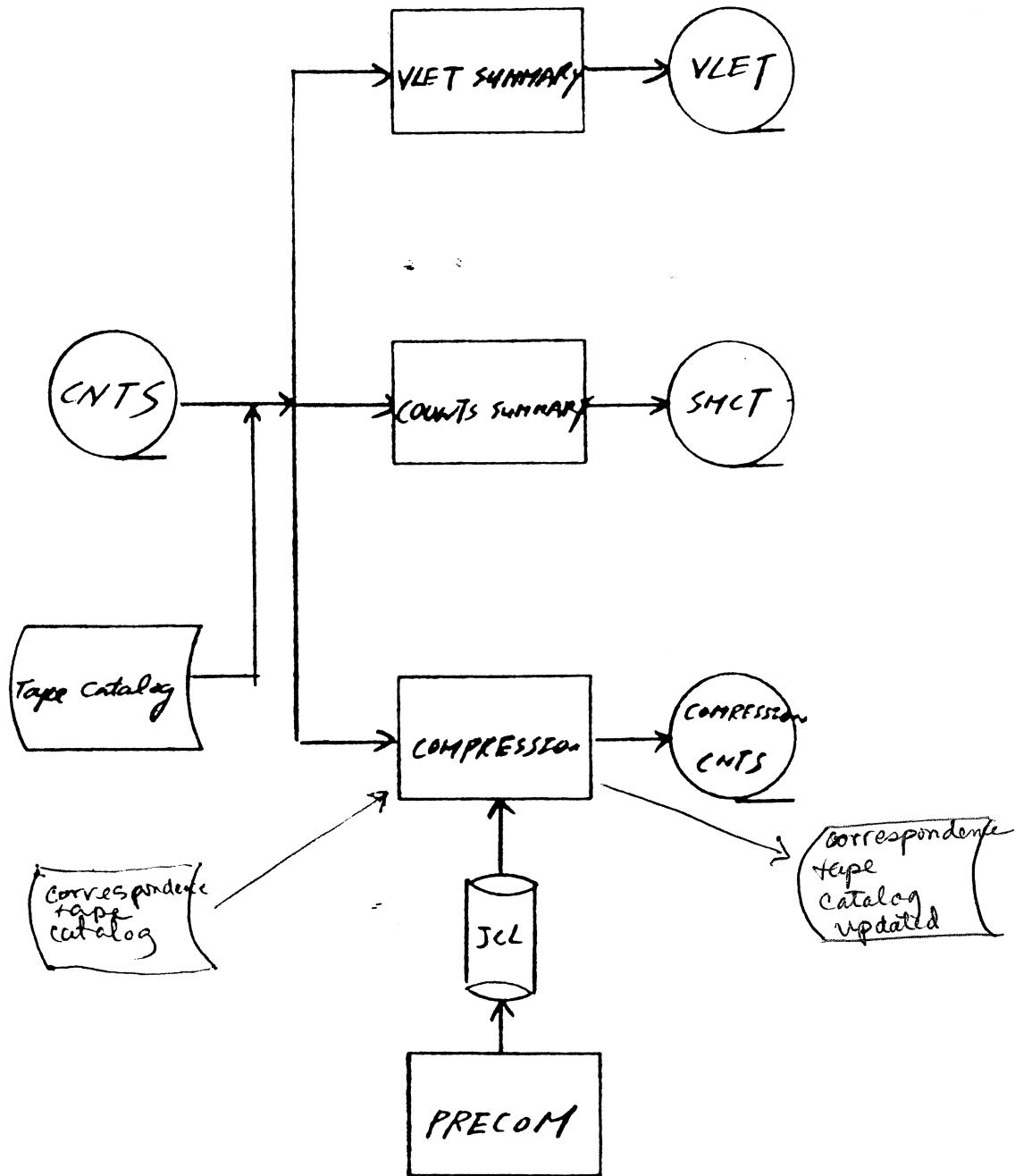
Time estimation needed to convert and test the assembler routines in IMP-8 program is as follows.

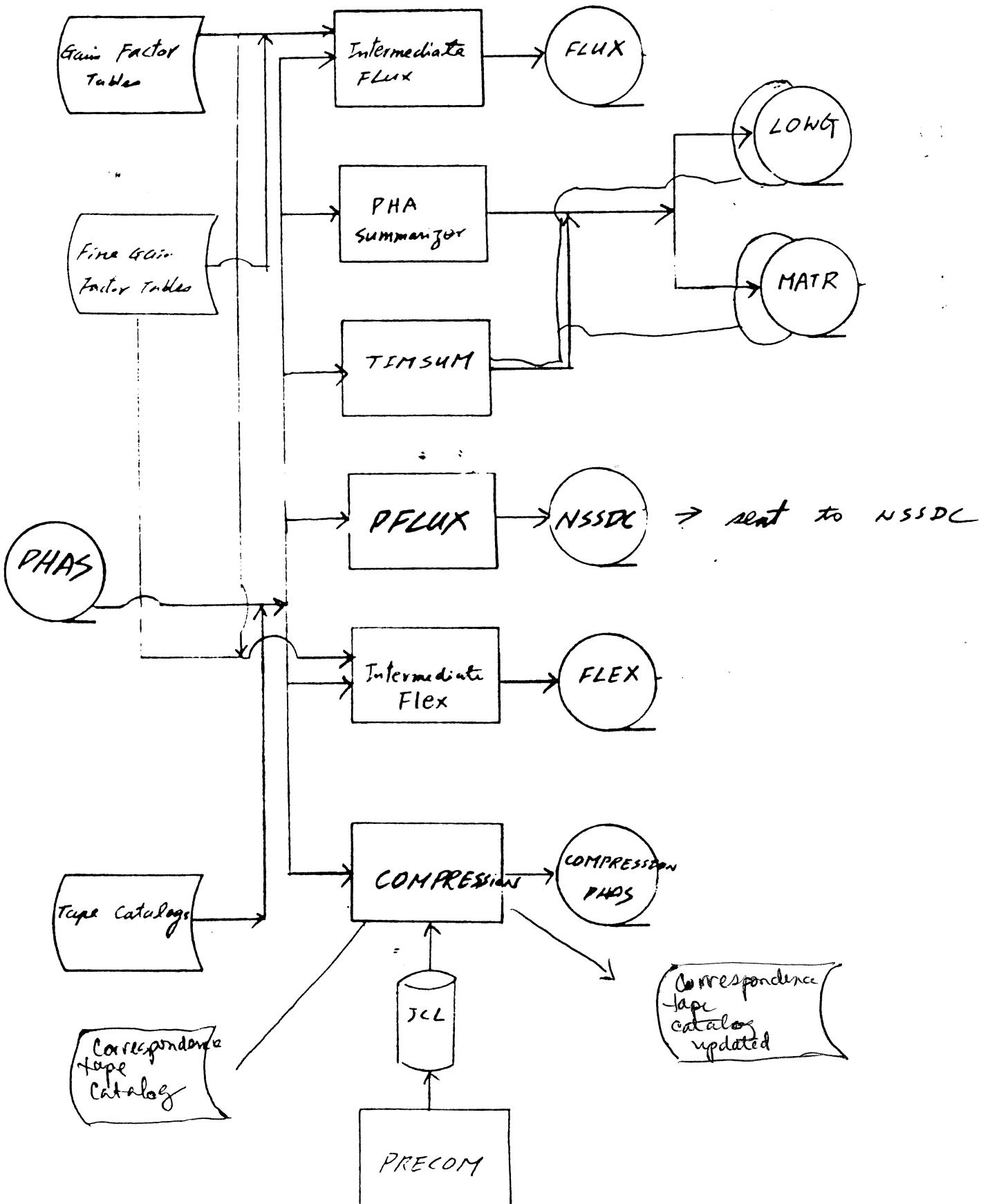
- A. PHA Summary Program : 2 months
- B. High Gain Program : 2 and 1/2 months
- C. ANLIMP8F Program : 1 month
- D. Intermediate Flux Program : 1 days
- E. VLT Summary Program : 1 day

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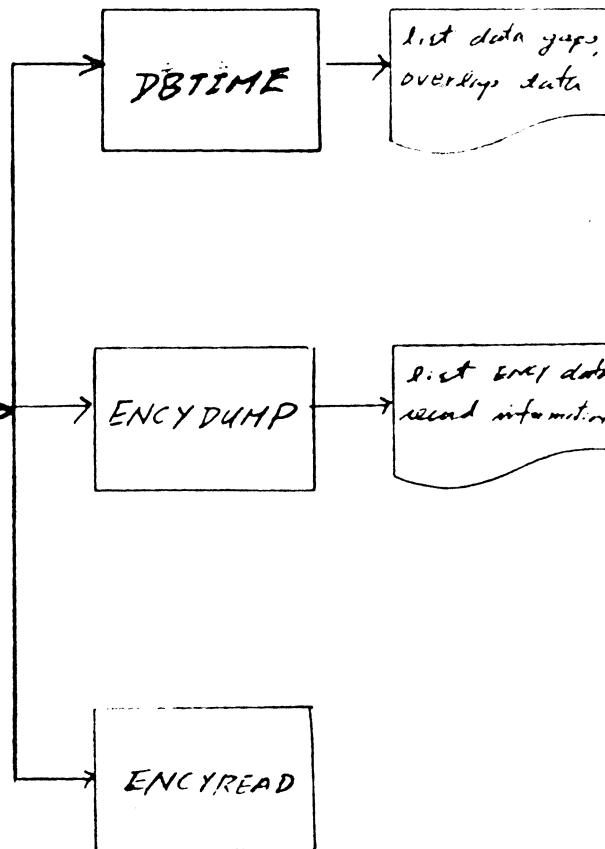
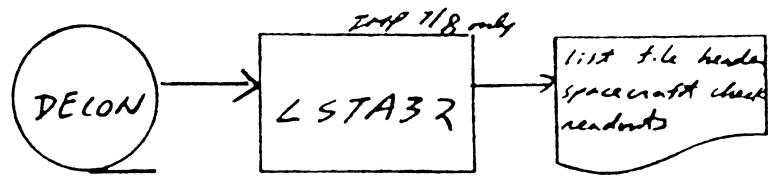
IMP data base generation program diagram

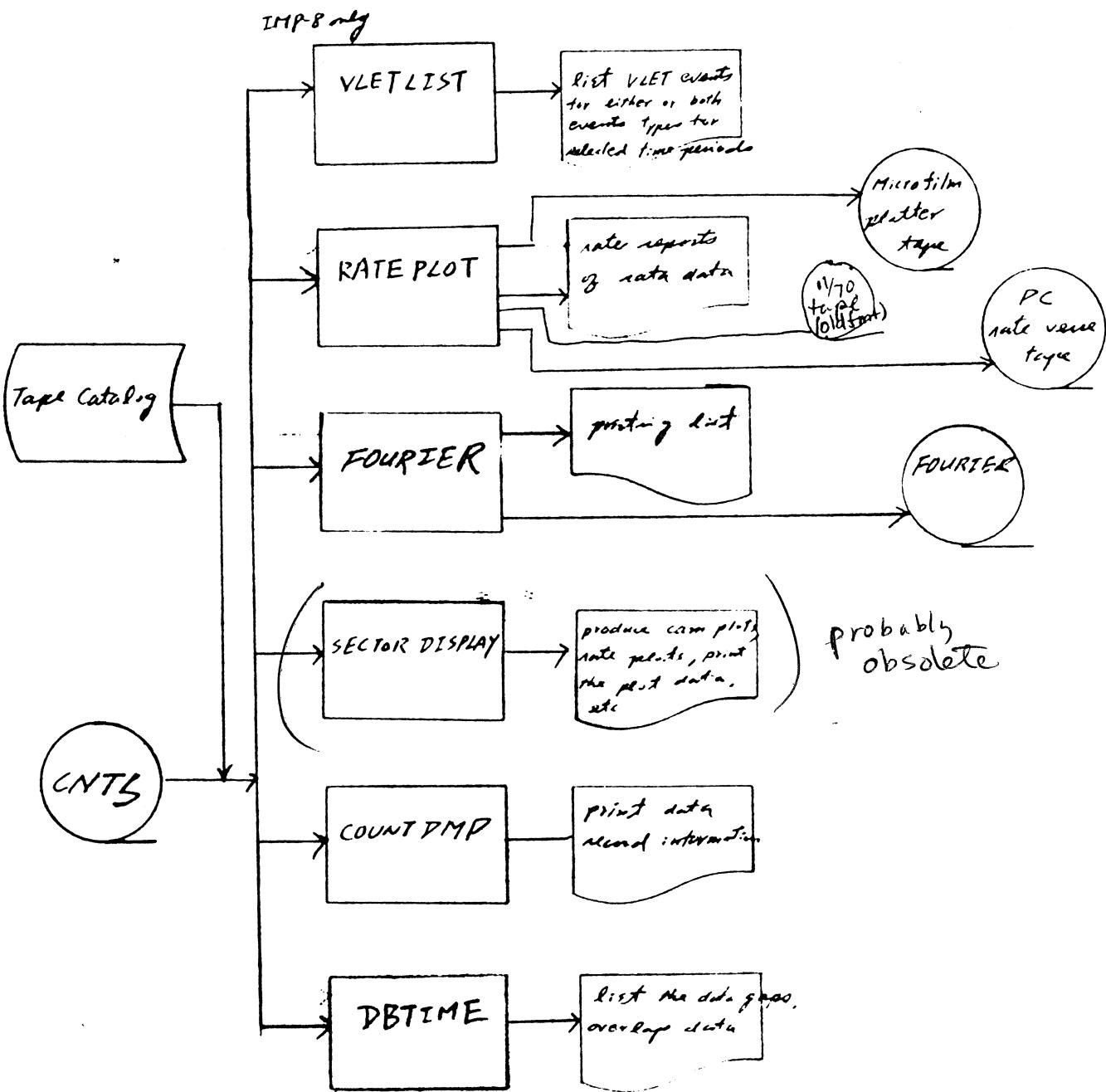


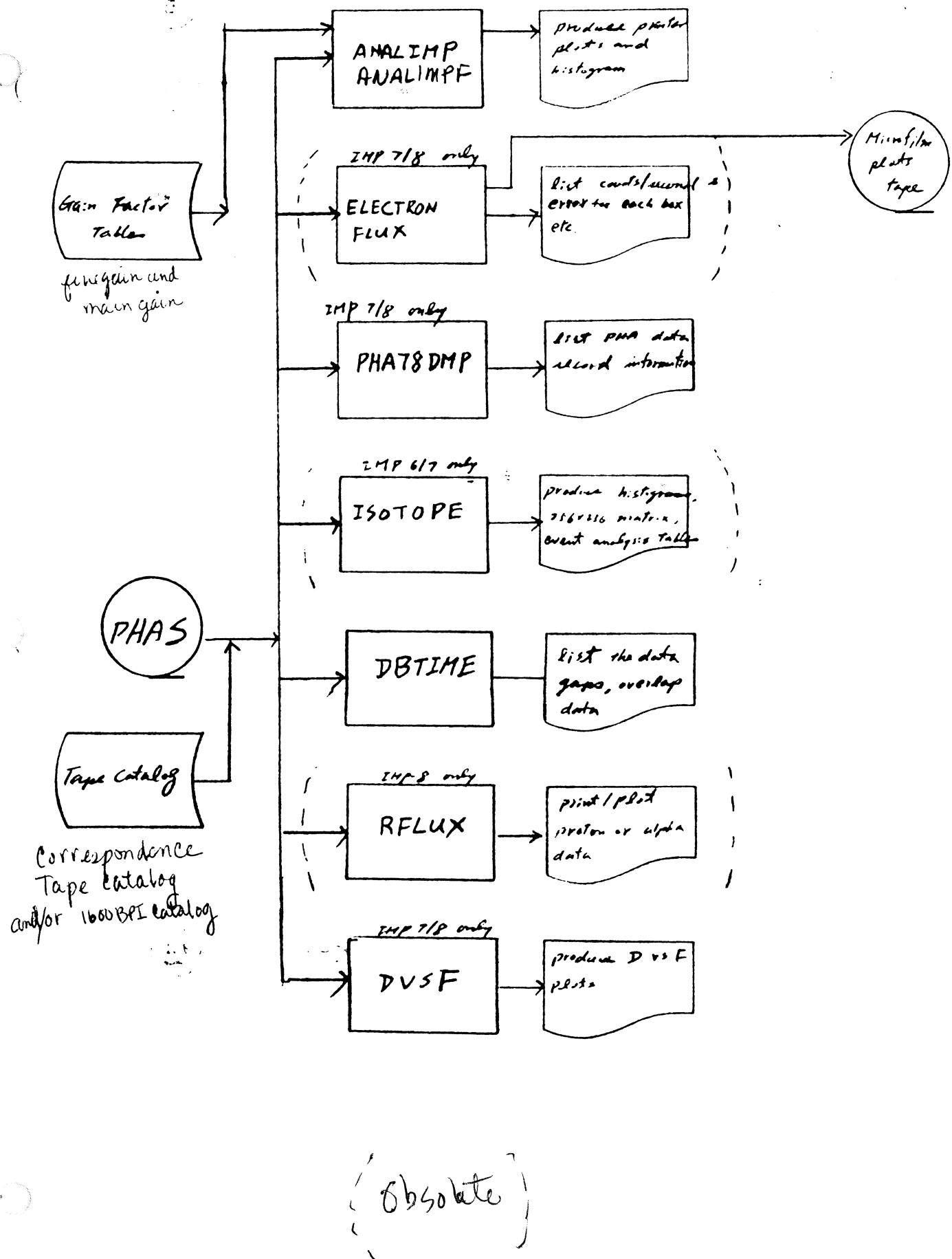


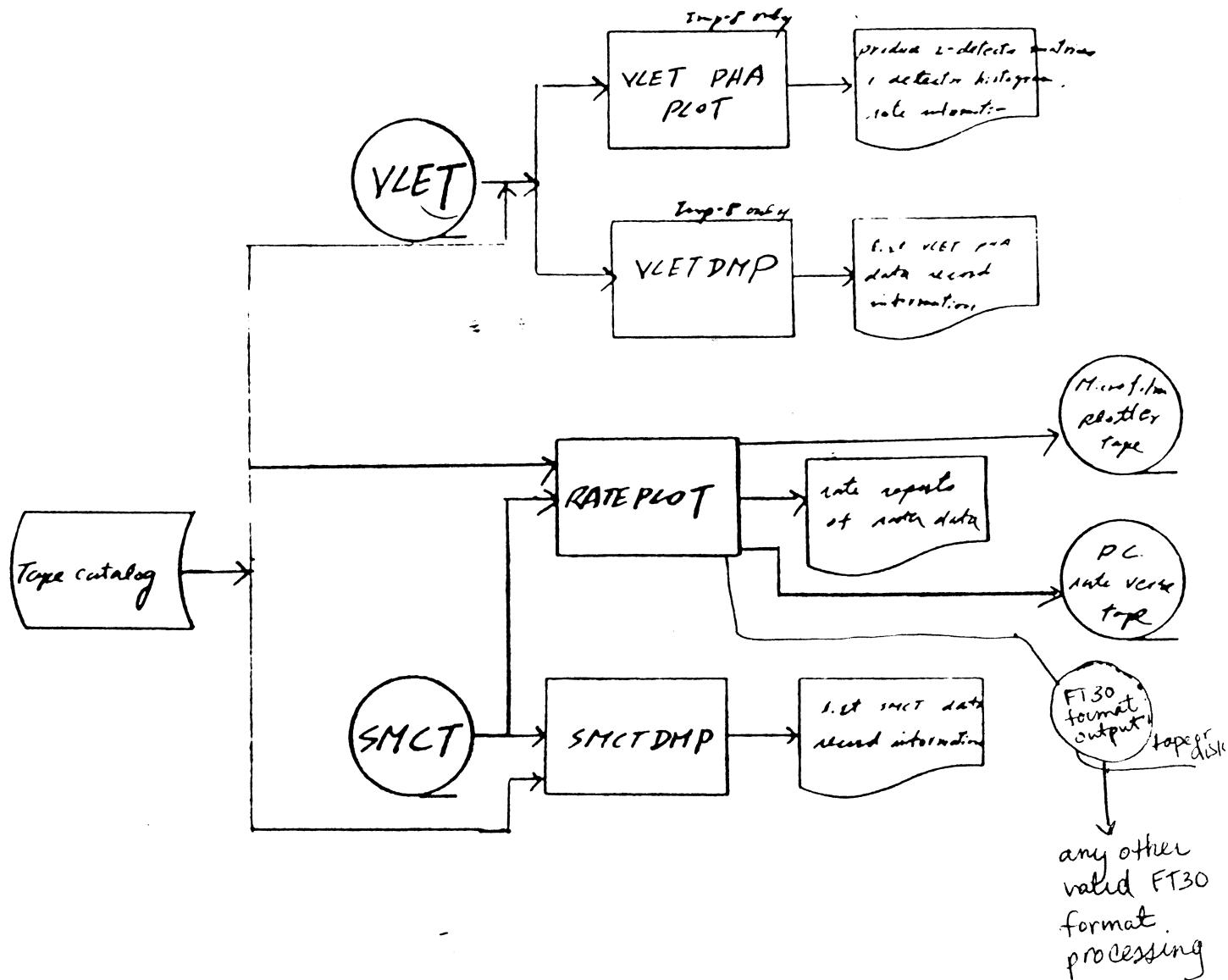


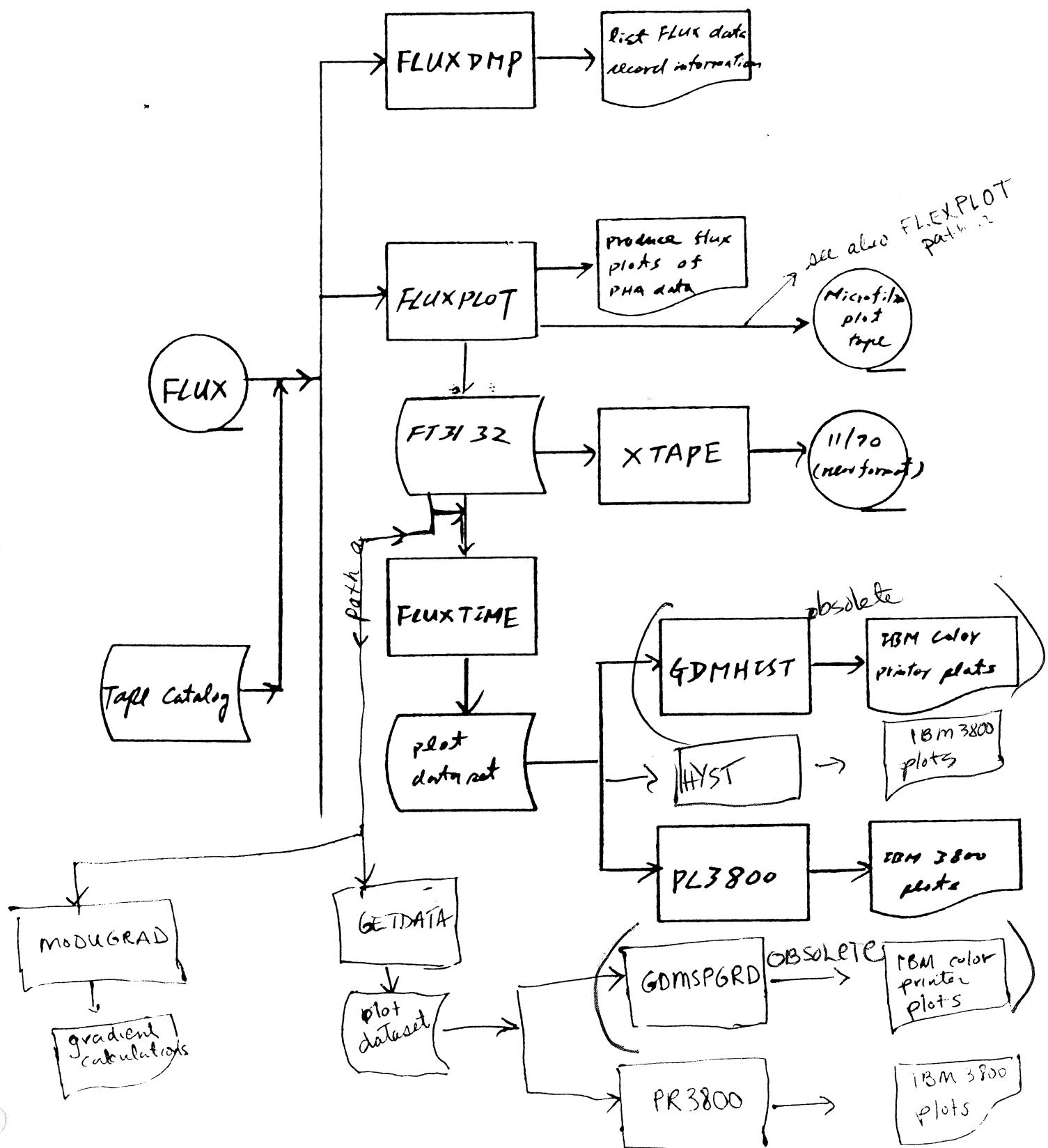
IMP data base analysis program diagram

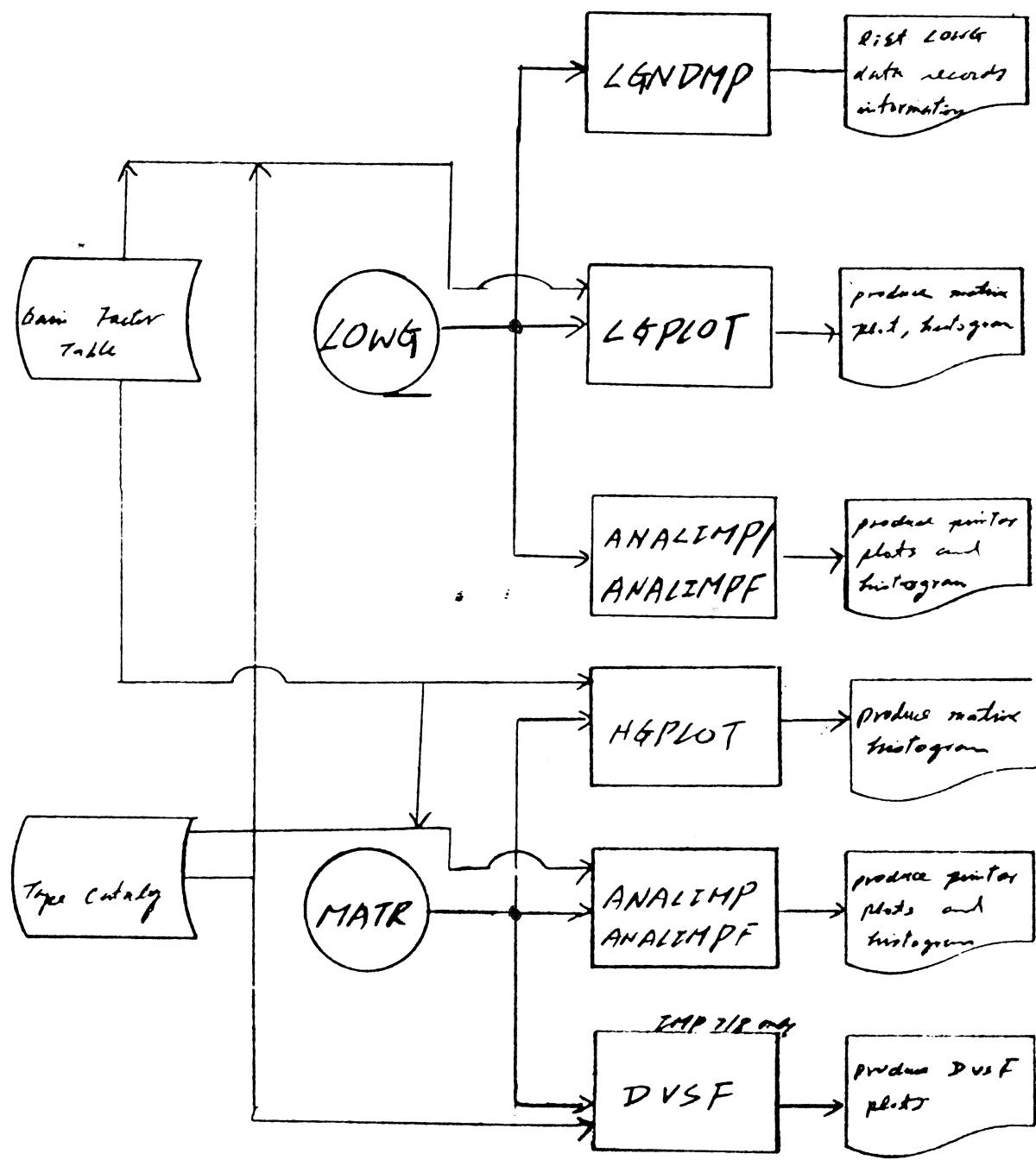


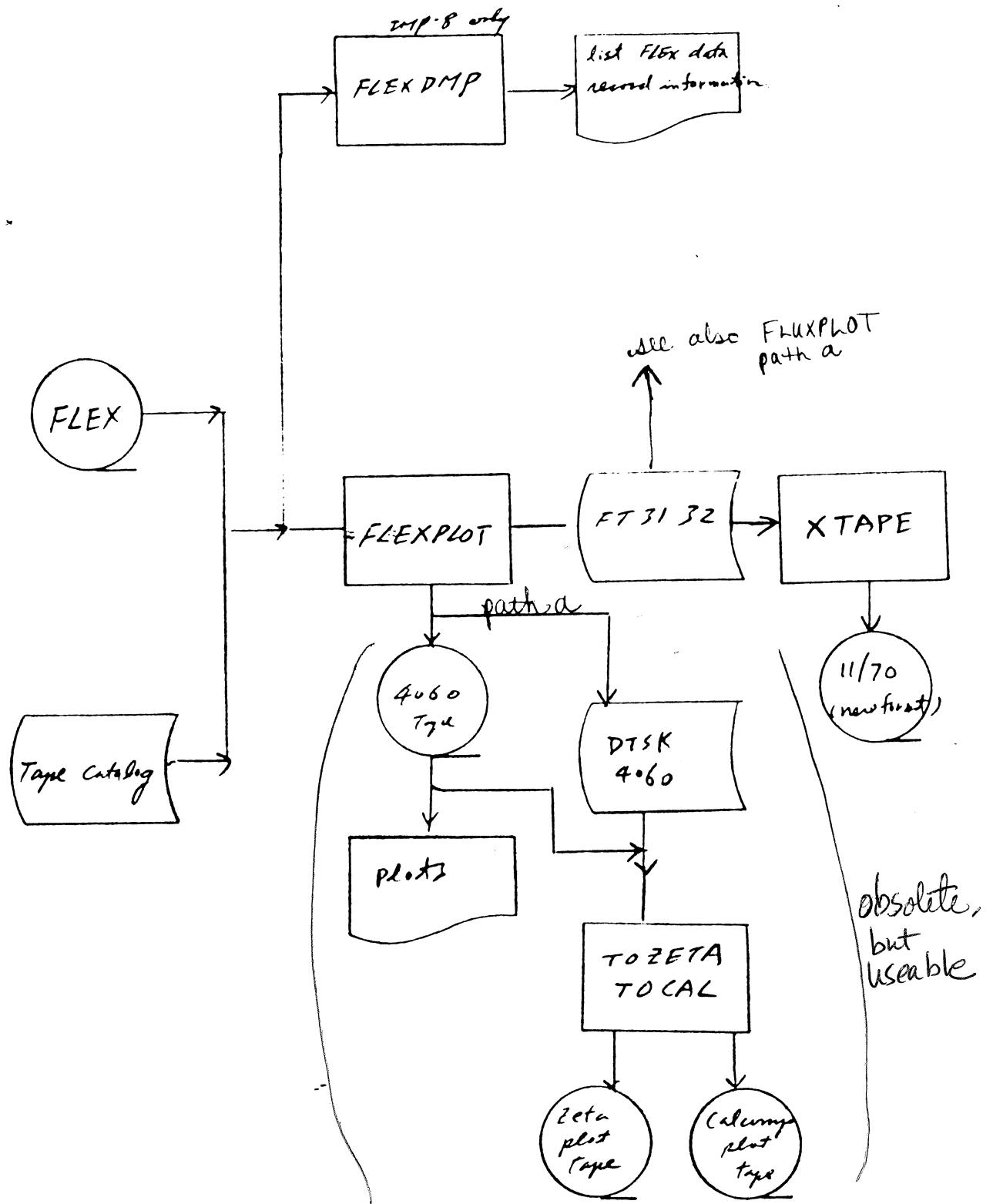




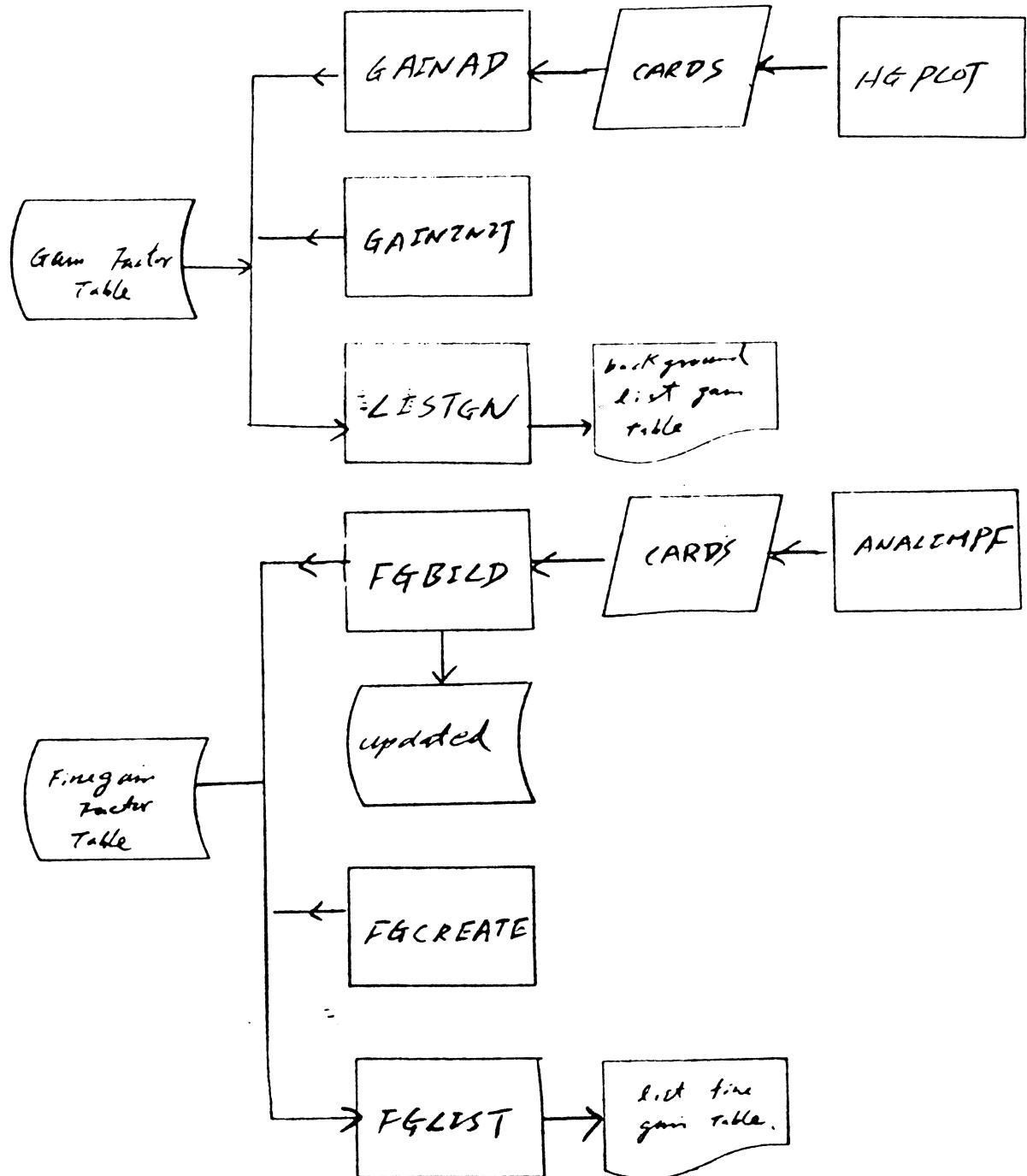






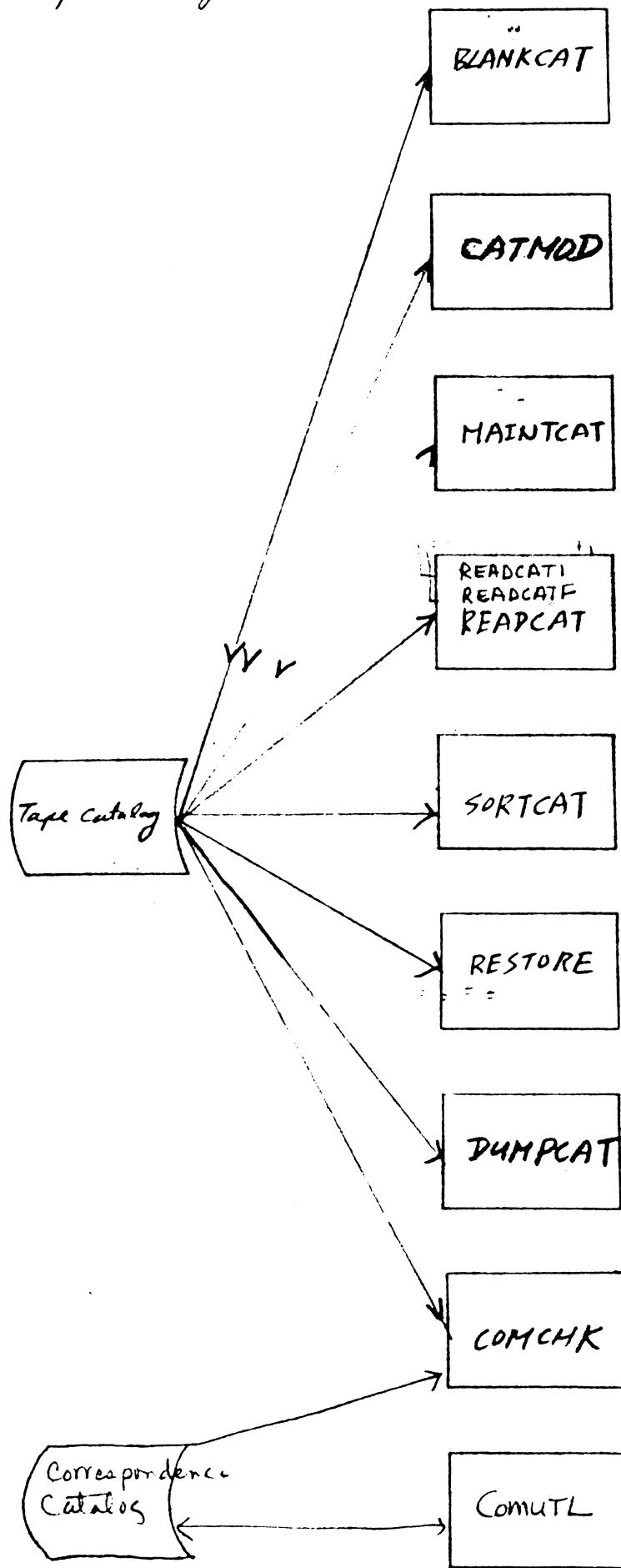


MED Gain Tables & Finegain tables



Tape Catalog utility program diagram

12



Miscellaneous utility programs

INTVLGEN = Generate listing of interval numbers
and their start times in year, month, day

GLSWS : General least square fitting program

SPECFIT : spectral fit package

Sources needed for
IMP-8
conversion:

members in dataset

(All IMP7, 6 members
are not needed for
IMP8, but some
are)

	FORTRAN	ASSEMBLY
SB#IM.IMP8DPS.SOURCE	19	8
SB#IM.IMP7DPS.SOURCE	15	4
SB#IM.IMP6DPS.SOURCE	18	4
SB#IM.DBG8.SOURCE	11	7
SB#IM.DBG7.SOURCE	10	7
SB#IM.VLTSMRY8.SOURCE	13	6
SB#IM.PHASUM8.SOURCE	11	9
SB#IM.PHASUM7.SOURCE	9	6
SB#IM.CNTSMRY8.SOURCE	23	3
SB#IM.CNTSMRY7.SOURCE	22	2
SB#IM.TIMSUM8.SOURCE	10	8
SB#IM.TIMSUM7.SOURCE	9	6
SB#IM.INTFLUX.SOURCE	21	4
SB#IM.INTFLUX.NEWSOURC	20	4
SB#IM.IMPLOT2.SOURCE	45	1
XRHHL.VS.RATEPLOT.FORT	51	1
SB#IM.I8VLTPLT.SOURCE	9	2
XRHHL.PCPHA.SOURCE	18	2
SB#PR.MULTISAT.FOURIER.SOURCE		
SB#IM.ANALIMP8.SOURCE	28	8
SB#IM.ANALIMP7.SOURCE	24	2
SB#IM.ANLIMP8F.SOURCE	23	6
SB#IM.ANLIMP7F.SOURCE	27	2
SB#IM.HGPLT8.SOURCE	15	7
XRPAS.FLXPLOT.SOURCE	21	0
XRPAS.FLXPLOT.NEWSOURC		
SB#IM.DBTIME.SOURCE	16	0
SB#IM.PRECOM.SOURCE	5	0
SB#IM.COMPRESS.SOURCE	14	0
SB#IM.UTILITY.SOURCE	20	1
SB#IM.COMUTL.SOURCE	6	0
SB#IM.LGPLT8.SOURCE	15	0

SB#IM.COMCHK.SOURCE	7	0
SB#IM.READCT.FORT	3	0
SB#IM.TAPEDMPS.SOURCE	15	0
SB#IM.FINEGAIN.CNTL	SMALL	0
SB#IM.PSEUDO.CNTL		
TOTAL	573	110

SB#IM.I8VLTLS, SOURCE

SEQDL. XTape . Source